THE VETERINARY JOURNAL

AND

Annals of Comparative Pathology.

DECEMBER, 1878.

THE USE OF THE TROCAR AND CANULA IN TYMPANY OF THE HORSE.

BY CAPTAIN RUSSELL, F.R.C.V.S., GRANTHAM.

DURING the past twelve months, I have used the trocar in five cases of Tympanitis in the horse, and happily on three occasions with perfect success; but twice without avail. The last two cases having been, in my humble opinion, of very great interest. I beg to offer a sketch of them to the profession generally.

On the 4th August last we were treating an ordinary case of obstruction in the bowels of a horse, due to an accumulation of ingesta in the large intestine. The case had proceeded in the ordinary way about ten hours, with more or less pain, and symptoms of inflammation, which had been kept in check by anodynes, hot fomentations, enemata, etc., when the animal—which was about twelve years old, and a heavy cart-horse, the property of a higgler—suddenly became very much worse. The abdomen was distended to an enormous degree; eyes anxious; breathing laboured; foaming at the mouth, etc., etc.,—showing a very critical state of affairs indeed.

I was sent for at once; but being from home, my assistant, Mr. G. Wartnaby, M.R.C.V.S., went, and immediately intrc-

duced the trocar into the colon at its most prominent part—about three inches in front of the anterior spine of the ilium, and about the same distance below the transverse process of the lumbar vertebra, on the right side. The result was exceedingly satisfactory, and apparent to the most casual observer.

The gas continued to escape for several minutes, and all the urgent symptoms became diminished.

Having administered a large dose of the hyposulphite of soda, with stimulants, and the pain continuing, he ordered the hot fomentations and anodynes as before.

On my return, in about three hours, I went to see the patient, and found him as much distended as before, and in imminent danger of death from suffocation. I again introduced the trocar, at a projecting place about eight inches below the first puncture, and immediately underneath it. From this time the case improved, the bowels began to respond, and we had no further difficulties to contend with.

Our last case was on the 26th October. About 5 p.m. on that day we were requested to see a six-years-old post-horse at the George Hotel in this town, which was suffering from a severe attack of Spasmodic Colic. After giving him an ordinary antispasmodic draught, the symptoms ceased.

At 11 p.m. he had a recurrence of pain; so we ordered an anodyne draught, with five drachms of aloes Barb. in solution, applied stimulating embrocation to the abdomen, and gave an enema. The horse passed a quiet night, but the bowels did not respond, nor did he eat his mash, etc.

About 9 a.m. he was suddenly seized with a return of the pain; and this continuing, we were again sent for.

On our arrival, about 10.30, we found him in a state of collapse: eyes sunken; pulse too quick and feeble to count; temperature 106°; breathing very laboured, and being a "roarer," the noise he made could be heard at a distance of thirty yards; foaming from the nostrils and mouth; and the abdomen distended to bursting.

I immediately introduced the trocar at the most projecting part—which was about the same place as in the first puncture in the last case described. After about five minutes the gas

ceased to escape; and finding the canula was not plugged, I withdrew it, and plunged it in again about ten inches lower down, towards the flank, where I succeeded in emptying the intestines of gas. This gave him relief.

Having administered a large dose of the hyposulphite of soda with a stimulant, I applied a mustard poultice all over the abdomen, and in half an hour had it removed, and resorted to hot fomentations, leaving small doses of the tincture of aconite to be given at frequent intervals, should the pain continue.

About 3 p.m. I was requested to call again, "as the horse was blown up as bad as before." I found him to be so, and terribly distressed. I punctured again, about an inch in front of the first operation, and with the desired effect. From that time, with careful attention, he has gone on well, and has made a good recovery.

In one of the fatal cases referred to, we punctured an old cart-horse five times in three days, giving relief at each puncture; but his death was caused by an enormous mass of undigested clover chaff, which had accumulated at the sigmoid flexure of the colon, and gave rise to inflammation.

I have never seen any ill effects at the site of puncture; nor in the two fatal cases could I find where the instrument had passed through the bowel. The canula, which was made to my order by Messrs. Burgess, Willows, and Co., two years ago, is eight inches long and about an eighth of an inch in diameter.

HYSTERIA.

BY HARRY OLVER, F.R.C.V.S., TAMWORTH.

A CASE of a unique character, in my experience, came under my notice a short time since; and I do not remember ever having seen a report of a similar one. I can only look on it as Hysteria. Professor Williams, in his "Veterinary Medicine," mentions the above as affecting animals occasionally during œstrum; but the fact of my patient being, as far as can be known, some months pregnant, makes it the more extraordinary.

I send you a short synopsis, hoping that you may be able to throw some light on it, and that it may be interesting to the readers of the *Journal*, should it be deemed worthy a place in that valuable periodical.

My patient was a thoroughbred brood mare, to which my immediate attention was requested on the evening of the 6th of September last. On my arrival, I was informed that this mare, with others, was seen apparently perfectly well at three p.m. About five, when she was to be taken into a loose-box as usual, she was found to be in a state of great nervous excitement; perspiring profusely; great difficulty in walking; straddling gait; continual micturition, etc.; and it was with the greatest difficulty, and only by the aid of several men, that she was got into an adjacent box. On my seeing her, about six p.m., the following symptoms presented themselves: Most intense nervous excitement, which was increased by the slightest noise; great rigidity of the muscles, particularly those of the gluteal region; whilst the power of volition seemed gone—her legs acting as props. There was profuse sweating; the eyes were turned upwards, as if in a trance, and the animal was perfectly blind; frequent neighing; continual opening and closing of the vulva, with expulsion of small quantities of urine, and a highly injected condition of the mucous membrane of the same part. Pulse 82; breathing accelerated, and every symptom of œstrum.

My first thought of treatment was to administer a draught of aloes sol., combined with tinct. opii and tinct. aconito; but on attempting to give it, I found the loss of muscular power in the gluteal region was so great, together with a perceptible difficulty in swallowing, that I desisted for fear of untoward results, and shortly afterwards gave a subcutaneous injection of coniæ, with the most satisfactory effect. In order to see that perfect quiet should be secured, I watched my patient, and had the satisfaction of observing her remain perfectly quiescent for nearly five hours. A slight return of the symptoms then took place, when I repeated the injection and left her until the morning. On my again visiting her, she was still perfectly blind, and more nervous than usual; but she had gradually recovered conscious-

ness, and would now take oatmeal gruel and a little bran mash. At night the pulse had regained its normal state, the muscles to a great extent had lost their rigidity, and the nervous excitement had subsided. But there was intense thirst, with somewhat obstinate constipation present—which latter was relieved by the administration of ol. lini. and aloes sol., assisted by enemata. Some days elapsed before she regained her eyesight; but from that time up to the present she has appeared perfectly healthy, and there is but little doubt about her being in foal.

[The case described by Mr. Olver appears to have been one of Hysteria in a severe form, which must be considered as of rare occurrence during pregnancy. All the symptoms enumerated are those which indicate the existence of the peculiar condition to which the name has been given, and which has been observed in bovine as well as equine females. Amaurosis is an exceedingly unfrequent complication of Hysteria, though it has been witnessed as a concomitant of pregnancy.—See "Veterinary Obstetrics," p. 177. It will be interesting to keep the mare above alluded to under observation until after parturition, should she prove to be really in foal.—ED. *V. J.*]

THE HARVEST BUG (*ACARUS AUTUMNALIS*).

BY ROBERT S. LAWS, STUDENT, TOULOUSE VETERINARY SCHOOL.

HAVING some time ago read with much interest an article in the *Veterinary Journal* on the "Harvest Bug," I determined, if possible, to obtain a specimen this year. I now forward a slide containing two of the creatures.

Zundel, in his Dictionnaire Vétérinaire (p. 831, Article "Parasites"), speaks of the Harvest Bug under the name of *Trombidion automnal*, and gives *Rouget* as the French vulgar term for it.

The first time I had an opportunity of examining the parasite microscopically, was about two years ago. I was then living in the suburbs of Paris; and I noticed that my little Scotch terrier,

recently arrived from Scotland, although brushed daily and well washed once a week, was always scratching his body and biting his paws. I at first thought it the result of either fleas or, as he had lately come from a much colder climate, perhaps *Lichen tropicus*. But on mentioning the circumstance to one of my friends—a Professor at Alfort—he recommended me to look carefully for the Harvest Bug, which, he said, abounded in the hedgerows and long grass at the roadside in that neighbourhood. I followed his advice, and soon found that his suspicions were well founded.

In the digital space between the second and third toes of the right fore-foot, I discovered the skin much inflamed, with abrasion of the cuticle—probably from the dog's teeth—and a crop of about five fine little bright scarlet spots exactly resembling Cayenne pepper. Following up my researches, I found around the eyelid (on the same side of the body), towards the inferior or nasal commissure, a much larger quantity, varying in colour from Nepaul pepper to that of the common Cayenne.

This year my little dog, having passed the autumn months out of town, has again been attacked; but owing to the heat of this southern climate I had him clipped *à la caniche*, so that no sooner was he attacked by his troublesome enemies than they were discovered.

The treatment necessary to get rid of the Bug is very simple. Scratch off with the finger-nail the red spots, or, in other terms, the parasites; then rub the irritated parts with

R. Iodine	1 part.
Glycerine . . .	4 parts.

If in the country, where a druggist's shop is not to be found, a simpler but more odoriferous remedy acts equally well. It is as follows:—

Common petroleum (as burned in lamps) .	1 part.
Lard or oil	2 parts.

In warm climates, if dogs are of the various mountainous and long-haired breeds, all the body must be clipped, except the head; but shaving must not be practised, as I have noticed that it generally gives rise to one of the many skin diseases which

the canine race is heir to. An exception may be made in favour of the poodle, which has probably been shaved for so many generations that a naked skin has almost become natural to the animal.

The best instrument for clipping is Clarke's small machine, made for removing the hair from the face and heels of the horse. It can be used with one hand, and leaves the dog smooth, yet with sufficient hair to protect the skin, and no notches.

It will easily be understood that the *Rouget* is soon found on the clipped dog; and indeed, if it is located on the skin of the belly, it is readily scratched off by the hind-feet without any further aid.

The name *Rouget*, although given on such a high authority as Zundel, is not the only name by which the *Acarus autumnalis* is known in France. Where I am now living, in the Department of Upper Garonne, the creature abounds; but I cannot discover any particular name for it, either in French or the local *patois*, and that of *Rouget* is unknown, although the peasants all know very well what the parasite is like, and its effects either on dogs or men.

STOMATITIS PUSTULOSA CONTAGIOSA.

BY A. J. OWLES, F.R.C.V.S., INSPECTING VETERINARY SURGEON, DUBLIN.

THE perusal of the extremely interesting paper, under the title of "Stomatitis Pustulosa Contagiosa," which appeared in the *Veterinary Journal* for November, has called to memory an outbreak of a pustular nature, affecting the buccal membrane and adjacent parts, among the horses of a cavalry regiment at Aldershot, during the months of January and February 1871, and which was to me very obscure, both as to its nature and etiology. The disease was designated "Aphtha," and the symptoms, course and termination of it presented such a striking resemblance to those recorded in the paper referred to above, that I am induced to send a short outline of the outbreak in question, extracted from my reports made to the authorities at

the time, as it may prove of some practical use to persons who have had no opportunity of seeing such cases.

The first case occurred on the 14th January, and was discharged cured on the 4th February; the next case (slight) was admitted on the 23rd January, and discharged cured on the 6th February. On the 8th February a third case appeared, and by the 14th of the month twenty cases were in the infirmary. By the end of the month all these animals were either cured or convalescent.

The disease prevailed chiefly among the young horses of the regiment, but not exclusively so. Two chargers, the property of one of the officers of the corps, were affected also, but horses of other corps in the garrison did not suffer.

Not more than thirty horses in all were attacked, out of a regiment of nearly four hundred horses. The strictest precautionary measures against the spread of the disease by contagion were observed, and with satisfactory results.

The principal symptoms were clusters of pustules on the buccal membrane and at the angles of the mouth, inside the lips, on the gums, beneath the tongue, and on the *frænum linguæ;* and in some few of the cases the pustules extended to the skin of the lips and head. In only one case were they noticed on the fore extremity, and in that instance only two pustules were seen on the coronet. The pustules, when situated close together, manifested a tendency to coalesce, and become confluent. In the milder cases, many of the nodules which appeared *did not* suppurate at all, but became absorbed. Ptyalism was present in the early stage of all the cases. I did not observe any soreness of the throat or inability to swallow. Constitutional fever of a mild character was present, and the submaxillary glands were swollen at the commencement of the attack in almost every case. The visible mucous membranes were injected, and presented a dark orange tint in several of the animals. Generally the pustules matured in the most favourable manner, and in a few days a cicatrix alone marked the situation where a pustule or ulcer had healed. The constitutional symptoms, together with the swelling of the glands, subsided, and the patients were convalescent in from seven to ten days. The treatment adopted by the vete-

rinary surgeon in charge of the regiment—since deceased—consisted in the administration of carbolic acid in 3ss doses morning and evening, and the application of the same to the ulcers. The animals were fed on appropriate food.

About two years ago, I saw three other cases in another regiment. In one of these, pustules were found *inside* the nostrils, and these did not heal quite so readily as the ulcers in other situations; but the patient recovered perfectly. As this animal had enlargement of the submaxillary glands, a certain amount of suspicion must attach to the symptoms, and an inexperienced veterinary surgeon could very easily form an incorrect diagnosis in similar cases. I therefore note them here. The opportunities for observing the disease are not frequent, judging from my experience of some thirty years, during which period I have seen it only twice.

INTERSTITIAL HEPATITIS AND BI-LATERAL NEPHRITIS—HYPERTROPHY, AS THE RESULT OF AN ENORMOUS THROMBUS IN THE THORACIC POSTERIOR VENA CAVA OF A COW.

BY PRINCIPAL WALLEY, EDINBURGH VETERINARY COLLEGE.

Subject—A very old cow (probably fourteen years), cross-bred, purchased by a dairyman in the end of May, 1878.

On the 10th of June purchaser sought my advice, stating that he had a cow with "Red-water"; that she had not been well during the whole time she had been in his possession; that she was purging, and that the urine had been red for several days.

From his description, I concluded that *it was* a case of "Red-water"; and as he had given a strong cathartic, I simply gave him two doses of ol. tereb. *et* spts. æth. nit.

As she appeared to be no better on the 12th, after having the medicine, the owner desired me to see her.

Symptoms presented were anæmia; emaciation; hidebound; harsh coat; suppression of lactation; dysorexia; partial sus-

pension of rumination; pulse slow; respiration and temperature normal; diarrhœa; marked general icterus; absence of physical lung symptoms; weak action of heart. Saw her both morning and evening, and while examining her in the evening she urinated. The first portion of urine was clear; towards the close the lower part of the stream became discoloured by admixture with red corpuscles; no clots. On rectal exploration, I discovered great enlargement of the left kidney (I could not reach the right); slight pain on palpation over the left lumbar region.

Diagnosis.—Chronic disease and hypertrophy of left kidney, with chronic disease of liver. Contented myself with administering ferri perchlorid. daily, and ordered linseed mashes, advising the proprietor to discover the former owner, send him my certificate, and hold him responsible, giving him the opportunity of sending a professional man to see the cow or come personally. He adopted this advice, and on the 20th received a communication from the vendor, repudiating all knowledge of disease, denying responsibility, and stating that two veterinary surgeons had seen her immediately before the sale, and were ready to swear that she was in perfect health.

I saw her on the 14th, and again on the night of the 21st; when, my opinion being the same as on the 12th—the animal rapidly emaciating, while the pulse was only 40 and the heart's action weak—the owner determined on slaughtering her. I saw her again on the 22nd, a short time before slaughter, at the abattoir, immediately she was brought in; when, from the excitement, she coughed irritably. (I had detected what appeared to me to be a thrombus, about the size of my little finger, in the left jugular fossa, on the previous evening.) Reasoning as to what could be the cause of the cough (seeing that there was no sign of lung disorder), and taking into consideration the condition of the heart and pulse, I came to the conclusion that there was some form of chronic heart disease, in addition to the renal and hepatic disorder.

I directed the attention of the inspector to the local authority (Mr. Reid, V.S.) to the cow, and asked him to examine her carefully and superintend the *post-mortem* examination, as I could not remain. About 8.30 p.m. I went to the abattoir, and

removed both kidneys from the carcase. I found them the seat of chronic interstitial inflammation, and enormously hypertrophied and scirrhous; the left was the larger, and contained in its pelvis a quantity of bloody fluid (none was in the right). The renal veins were enormously dilated, and the coats thickened.

The liver was in the same condition as the kidneys: nodulated on the surface, dark in colour; the posterior *vena cava,* as it passed through the diaphragm, was twice its normal diameter, and four or five times its normal thickness. The gall bladder contained a moderate quantity of bile of a very pale colour—due to the absence of bile pigment. The lungs were healthy. The heart was also healthy, but small, and weighed only 5 lbs. The thoracic posterior *vena cava* contained an enormous thrombus, which was solid, unyielding, decolorized, and smallest and somewhat conical on its proximal end, obliquely truncated, smooth, and round-edged on its distal extremity—which was also darker in colour than the proximal. It was intimately connected with the *tunica intima* by numerous bands of firm, white, new connective tissue. The coats of the vein at one part were as thin as tissue paper, but intact. The thrombus measured nine and a-half inches in length, and ten and a-half inches in circumference.

	lbs.
Weight of liver	35¾
Left kidney	8¼
Right kidney	7¼
	51¼

Conclusions.—The thrombus had probably originated in some injury to the *tunica intima* of the vein, and had gradually increased in size—this being the more probable as it was so intimately connected by fibrous bands to the vein, these bands being the result of phlebitis and organization of fibrin. A channel existed on one side of the thrombus, capable of admitting about three little fingers laid side by side—thus allowing the blood to flow slowly through.

The obstruction in the vein (which must have been in existence for quite twelve months) had caused regurgitation of blood into the liver and kidneys, and thus produced mechanical

congestion, followed by interstitial inflammation, hypertrophy, and scirrhus.

The diarrhœa was produced by the absence of bile. The absence of any organic disease of the heart and lungs is accounted for by the obstruction being located posteriorly to them, and occurring in a vein; and by the fact, that no secondary or prolonged thrombus had been formed to block up the pulmonary vessels.

The shape of the distal extremity was caused by the oblique position of the *foramen dextrum* of the diaphragm, and this also accounted for the fact that there was no secondary remaining thrombus on this extremity. The absence of soft thrombus on the proximal extremity was accounted for by the fact that the stream of blood from the anterior cava would prevent its formation, by washing away even the smallest attempt at a coagulum.

On making a longitudinal section of the thrombus and the vein, it was discovered that it was really composed of two (about equal) parts, intimately connected; coagulation having commenced at two points, and gone on in layers, forming what might be spoken of as two stratified hæmatomata,—the centre of the posterior one having commenced to soften by the action of a large transverse ring of vascular granulating tissue, while the floor of the anterior part had also commenced to soften from a circumscribed granulation. These granulating centres had evidently resulted from Phlebitis; the original roughenings of the *tunica intima* acting as starting-points for the formation of the clots. Both clots were perfectly decolorized throughout.

LOODIANAH OR ANTHRAX FEVER AT RAWUL PINDI, INDIA.

In the months of August and September last, a serious outbreak of the Anthrax malady known in India as "Loodianah Fever," occurred at Rawul Pindi, Punjāb, and which, according to a Lahore paper, occasioned the loss of thirty-eight horses in one

battery of artillery alone, and caused so much alarm that the Principal Veterinary Surgeon in Bengal—Mr. Collins—was ordered to proceed thence from Simla to inquire into the circumstances which gave rise to the epizoöty. From information received from Mr. Collins, we learn that when he reached Rawul Pindi, on August 29th, fifty-seven horses of the battery had been attacked, forty-eight of which had died and one subsequently succumbed. Three of the horses affected at that time offered doubtful symptoms of the disease; and among the fifty-four, of twenty-seven sick Australian horses twenty-five perished, of twenty-three native stud-bred horses twenty-three died, while of four North-country horses two fell victims. Of the total forty-nine deaths, thirty-nine were geldings and ten mares, while of the whole number attacked (fifty-four) there were forty-one geldings and thirteen mares.

Previous to the outbreak there were 112 horses in the battery; of these forty-nine were Australian, fifty-five stud-bred, and eight North Indian. The percentage attacked of the first-mentioned was 55·10; of the second 41·81; and of the third 50,—the stud-bred horses, according to these figures, withstanding the morbid influences better than the others. The average age of the horses was $10\frac{1}{2}$ years; of those that died $10\frac{1}{3}$ years.

The duration of the disease varied, from the apparent commencement of the attack, from three hours to six days—five dying in the shorter period and only one in the longer; eight succumbed in from twelve to seventeen hours, the largest number perishing in that period up to three days' illness.

Seven healthy horses were in the infirmary stables when the disease first broke out in the troop lines, and these animals were at once removed to the lines to make room for the cases first attacked. Curious to state, five of the seven were seized with the malady after their removal, and died, two alone escaping. On the opposite side to where the seven horses stood in the infirmary, nine horses of another battery of artillery also stood, and were removed at the same time; but none of these were attacked. An officer's charger standing in a loose-box died; but from the symptoms described to Mr. Collins, and more

especially from the character of the pulse—which was but little increased in frequency—he did not consider it a real case of Anthrax Fever.

On the evening of Mr. Collins's arrival at Rawul Pindi, four horses of the 10th Hussars were seized, and next morning one was dead, and another soon died. An examination of the bodies of these revealed the characteristic lesions of Anthrax. These four horses were picketed apart from their troop lines, and the surviving two were removed about half a mile distant, to the shade of some trees. During the afternoon of the same day, two other horses of the same troop, and one of another troop, were reported affected.

We have in this *Journal* recommended the internal administration of carbolic acid in the treatment of Anthrax Fever; and we are pleased to find that Mr. Collins at once commenced to treat the four cases—the two surviving of the first four attacked, and two of the three last reported—with that drug: half a fluid drachm being given in six ounces of water three times a day. Only one of the four patients died, and this was the one first seized—the other three becoming convalescent. Experiments with the carbolic acid are to be continued.

An inspection of the horse lines, to discover the cause of the outbreak, resulted in finding the flooring formed of alluvial soil to the depth of four feet, this resting upon the virgin loam of the country. The upper stratum of the artillery lines was impregnated with urine to some depth; that of the 10th Hussars was foul to the depth of four feet, and was porous and friable—being altogether different to the alluvial soil six feet below the surface.

Mr. Collins remarks that the surface alluvial soil appears, from past experience, to possess—under certain conditions—the peculiar property of generating Loodianah Fever; and in his suggestions as to the prevention of the disease, he recommends its entire removal from infected lines, fresh soil being substituted. As supporting his views with regard to the influence of tainted alluvial soil in the production of this serious scourge, he describes the flooring of other horse lines at the same station as being quite different to that on which the sick horses stood. Immediate

removal of the horses to other ground is recommended when the Fever appears among them.

Mr. Collins does not allude to the symptoms of the malady; but as we have already given them in "Veterinary Sanitary Science and Police," and as they have also been well described in our pages by several recent observers, the omission is of no importance here. We may, however, remark that a communication received a short time ago from Mr. Meyrick, who is stationed at Rawul Pindi, refers to this outbreak, and in casually noticing some of the more prominent symptoms, makes us acquainted with some facts which complete Mr. Collins's report from a pathological point of view. Mr. Meyrick writes as follows:—

"As I noticed in your *Journal* for July that you want more blood from Loodiana Fever cases, I sent you three drops in some aqueous humour by the last mail. I could not procure a smaller bottle than one which had contained chlorodyne, and hope that the large quantity of air in it will not produce any unlooked-for changes by causing decomposition. The horse from which I took the blood was ill for three days, and for the first two had a discharge from the nostrils, exactly like that of Catarrhal Fever. On the morning on which he died, the discharge assumed a lymph-like character, and an hour or two before death became tinged with the colouring matter of the blood.

"There was sore throat, with slight swelling, from the commencement, and the infiltration at the upper end of the trachea suddenly increased on the morning of the second day. From the beginning of the attack until just before death, the pulse remained steadily at about 72 per minute, and the temperature of the rectum was 106°.

"The *post-mortem* examination revealed the usual exudation of lymph into the omentum and other parts external to the intestines, with large dark patches here and there of blood-corpuscles. These are indications which merely prove decomposition or loss of vitality in the blood, and are not, I think, diagnostic of Loodiana Fever only. I have seen very similar, if not identical, appearances after death from snake-bite.

"In this case the lungs became congested a few hours before death; and on opening them, I found the bronchial tubes filled with foam—evidently caused, I think, by the swelling around the throat impeding respiration.

"Fever of a malarious type has been extremely prevalent among both Europeans and natives all over the Punjāb for the last month, and—as you will have heard from other sources—there has been a very severe outbreak of Loodiana Disease among the horses at this station. Perhaps the two may be in some way connected."

In "Animal Plagues," which was published some years ago, we pointed out the possible relationship between malarious fevers in mankind and Anthrax diseases in animals; and our correspondents in India have a good opportunity of furnishing us with evidence with regard to this relationship. In these outbreaks of Loodianah Fever, the health of the other domesticated animals might be alluded to. Do cattle suffer to any extent from the malady in those districts in which horses are severely visited? Or is this equine Anthrax different from that which affects bovines? In the *Veterinary Journal* for September (p. 169), we have given a notice of some valuable and interesting researches on a new form of Anthrax-producing germ, which merits the attention of our colleagues in India.

Mr. Meyrick's inoculated aqueous humour arrived safely; and on examining it immediately afterwards, Professor Duguid found numerous *Bacilli anthracis*. On October 11th, a guineapig was inoculated, and on the evening of the 13th it died. On examination of its body, the local subcutaneous exudation, as well as the blood and the contents of the spleen, contained great numbers of the *Bacilli;* in the latter they were innumerable.

The result of this experiment, together with what we had previously done and described, clearly establishes the identity of this Loodianah Fever of India with Anthrax,—indeed, in "Veterinary Sanitary Science and Police" we had already come to this conclusion.

There are still some important points to elucidate with regard to the pathology of the malady, and we shall feel much indebted for further small quantities of blood or inoculated aqueous

humour. Nothing is better for its conveyance than clean capillary glass or vaccine tubes hermetically sealed; as the exclusion of air is essential in the prevention of decomposition, and consequent preservation of the disease-producing germs—the *Bacilli anthracis.*

In addition to the employment of carbolic acid as a prophylactic and curative agent, we would recommend the internal administration of salicylic acid or iodine, as well as the subcutaneous injection of the latter or carbolic acid into the external infiltrations or tumours which so frequently appear in this disease.

CHAMPIGNON—SARCOCELE—SCIRRHUS OF CORD—INDURATED CORD: A REMOTE SEQUEL OF CASTRATION.

BY A. E. MACGILLIVRAY, V.S., BANFF, N.B.

THIS is a disease about which there are a great many misty and erroneous ideas afloat; and no wonder, if we consider the ambiguity of its most common designation—*Champignon.* We are indebted to the French for this anomalous *nomen,* which literally signifies a *mushroom;* and, no doubt, certain rare cases of Champignon do somewhat resemble, in rapidity of growth and shape, the generality of mushrooms. But, as has been remarked by a writer in the *Veterinary Journal* (vol. i.), the French might with as much reason and accuracy have styled it *Choux-fleur,* or, in plain English, *cauliflower!*

Just as inappropriate, and equally as irrestrictive, is the appellation of *Sarcocele* (W. Williams), which was originally confined to disease of the testicle *per se,* without any reference whatever to castration. There were several varieties of this Sarcocele of the testes, one of which I have more than once met with in bulls—namely, Tubercular Sarcocele. I remember castrating a two-year-old bull which was suffering from Tubercular Sarcocele in one of his testes, and in which the diseased testicle weighed over eight pounds! He recovered from the operation, but had to be slaughtered the following year, while labouring under severe Pulmonary Tuberculosis.

The real meaning of the word "Sarcocele" being a "fleshy tumour," it is, of course, quite admissible to speak of *Sarcocele of the Cord after Castration;* but when it is understood that the term is intended to represent a disease of the testes, then I consider it would be preferable to find another and more restrictive designation for the accidental affection under discussion.

Scirrhous Cord, or Indurated Cord, after castration, is as appropriate and as comprehensively descriptive a name for this untoward sequel of orchotomy, as can well be got.

Excision of the testicle having taken place, the disease (generally) consists of an enlarged and indurated state of the denuded end of the recently manipulated spermatic cord. This indurated enlargement is commonly characterised by the great number of accompanying and newly-formed bloodvessels of large calibre; by the great amount of dense fibrous tissue, resulting from the organisation of *the profuse exudation in the primary stages*; and, if the scirrhus is at all ex-scrotal, by the irritable, bloody-fungous—in fact, *choux-fleur*-appearance of the *external* part of the champignon.

In addition to these characteristics, in every case coming under my notice I have invariably found deep-seated pus in greater or less amount; and I have successfully treated two valuable Clydesdale horses, in which the induration was nearly as large as one's head, by the evacuation of the pus and the external application of iodine. In such cases the pus is always scanty, and never in anything like proportion to the size of the induration. In the month of May last, I excised a champignon (entirely intra-scrotal) of some four or five pounds weight from a two-year-old colt, castrated by torsion when one year old; and in the centre of the excised lump there was about half an ounce, or thereabouts, of good sound laudable pus! It was a very formidable operation; was finished by ligature; and did remarkably well.

True scirrhous cord is not an affair of rapid growth, and must not be confounded with the quite common *effusive* state of the cord and coverings *immediately* after castration. The latter condition will often disappear, even without the formation of pus, by absorption of the effused material; commonly, how-

ever, in these cases of pseudo-scirrhus a pretty free discharge of matter takes place, and resolution immediately follows. I had a very suspicious-looking case of this sort, in May last, in a year-old colt. This colt had scrotal hernia in one side; and, after reducing the hernia *per rectum*, I applied a steel clam above the testicle (outside, and embracing scrotum and all), as recommended by Principal Williams. A fortnight after, on removing the clam and cutting away the dead tissue, I discovered no attachment of the end of the cord to the scrotum; but I did not explore inside the scrotum to ascertain the state of matters there. After the lapse of another fortnight, I again threw the colt, to remove the second testicle, and was astonished to find an immense champignon (?) filling up the entire half of the scrotum already operated on, with a large red and raw-looking fungous excrescence jutting out from the place where the wound had been in the scrotum!

This enlargement was very hard, and the whole affair looked extremely bad; so that I was much disappointed, and somewhat at a loss how to proceed about the removal of the remaining testicle. Fortunately, however, I had two professional friends with me; and we concluded to remove the testicle, which I did by torsion. *Nothing was done to the indurated cord.*

Now mark the result in this case. Here was, apparently, a very serious champignon occurring just one month after castration; nothing was done to it at the time I removed the second testicle; and yet, by the time the effects of this second castration had been got rid of, the pseudo-champignon had also completely disappeared,—not a vestige of it was to be either seen or felt!

The enlargement in real scirrhous or indurated cord is an organised body, of firm consistence, and abundantly supplied with bloodvessels. It ought not, therefore, as I have said, to be confounded with these effusive swellings in and about the loose tissues of, and surrounding the cord: the latter being a proximate and simple sequel of castration; while the former is remote and well organised—generally becoming, in fact, part and parcel of the animal economy, and often remaining stationary for years, like any of the other organs of the body.

According to Principal Walley, its mode of formation is by

repeated layers of exuded lymph, which layers generally become organized, and in many cases continue forming as long as the irritative cause remains. In other cases, the deposition of these organisable exudations ceases, and they become broken up upon the formation of pus; while, on the other hand, certain cases of small scirrhosities of the cord remain stationary, and, as it were, part of the body-corporate for years, or it may be for life!

According to Peuch and Toussaint ("Chirurgie Vétérinaire"), a true champignon is formed of embryonic tissue—the product of an inflammatory action; and is produced by the throwing out of plastic elements which cause tumefaction of the cord and subsequent abscess, which abscess is enveloped in a sclerotic shell. Its formative course may, in fact, be likened to that of a common phlegmon.

The *causes* of scirrhus of the cord after castration may be summed up in one word—namely, *irritation.* Professor Williams thinks that the chief producer of the necessary irritation is the fact of the end of the vascular cord accidentally becoming attached to the lips of the wound in the scrotum, and this principally after the operation by caustic clam; or sometimes, after operating by the actual cautery, the cord is left too long, so that it protrudes beyond the opening in the scrotum. These causes may, and in some cases do, induce champignon; but that they are the chief agents in its production is questionable and, I think, inconsistent with practical observation. For instance, every country practitioner is aware of the preponderance in numbers of bovine over equine castrations; and yet, although neither the caustic clam nor hot iron are ever used in castrating the former, we find a great many more scirrhosities of cords after castration in cattle than in horses. I have often operated in cases of double *scirrhi* in young cattle, where the excised enlargements were as big as goose eggs, were very hard, resembled white fibrous tissue, and invariably contained nuclei of pus. In the majority of these bovine cases, the indurated enlargement was quite loose and movable within the scrotum—in fact, just resembled, as it were, a second edition of the previously excised testicle. So much was this the case in one

or two instances, that one could easily have imagined that the affected animal had never been castrated!

The primitive agents of the irritation, forming the proximate cause of scirrhus, are various: such as retention of the ligature in castration by ligature; the adhesion to the end of the cord of a scale from the hot iron in castration by actual cautery; leaving too much bruised tissue in castrating by torsion; retention of coagula in cases of hæmorrhage; rough usage of manipulated part of cord, etc., etc. But, arising from whatever original source, the true and only proximate cause of champignon is *irritation.*

Concluding Remarks.—From experience, I am convinced there are two distinct phases of this affection of the cord (left after orchotomy), comprehended under the one designation—whether such designation be "Champignon"—*Choux-fleur*, "Sarcocele," "Scirrhous" or "Indurated Cord." In the one case we have the hard fibrinous enlargement composed of the organised exudates, which may be rightly called "scirrhous" or "indurated cord"; in the other we find a truly fungus-like production (of sprouting granulations), having its origin in the end of the cord, presenting a remarkable *choux-fleur* appearance, and composed of a hard fleshy *materiel* resembling that of true sarcocele of the testes. To this latter variety of the affection the appellation "Champignon" is quite admissible and correct.

The chief consideration, in all cases of this untoward disease of the cord in horses is, in my opinion, whether or not excision is at once necessary; and I maintain that, if the enlargement is of comparatively recent origin—that is, has occurred shortly after castration—excision is not immediately called for. Strong applications of iodine or its compounds ought to be tried; and followed shortly by exploration for any deep-seated pus, a thorough evacuation of such having often a very beneficial effect. In cases where I have come upon and evacuated deep-seated pus, I have always been very careful to syringe out the cavities, and in so doing have often, no doubt, removed the irritating cause. At any rate, after evacuation and thorough syringing, the indurated enlargements often take to themselves "wings and fly away."

Editorial.

PROFESSIONAL UNITY.

THERE is at last every prospect of the unity of the veterinary profession in this country being an accomplished fact, and that which has for many years been the earnest wish of all true friends of professional advancement becoming realized. By the friendly overtures which have taken place between the Royal College of Veterinary Surgeons and the Highland and Agricultural Society of Scotland, and a display of concessions on both sides—but largest of all, perhaps, on the side of the Royal College—the Society has consented to cease bestowing its certificates of proficiency on students of veterinary medicine, after a certain period has elapsed. This is a consummation which we and other well-wishers of the profession had long hoped for, but scarcely expected to see so soon achieved. It has, for at least thirty years, been evident to those who could look beyond the walls of a school, or the narrow limits of a selfish policy, that the welfare of veterinary surgeons and the improvement of their science were gravely compromised by the antagonism existing between the Body Corporate and the Agricultural Society—an antagonism which was only too often openly manifested between the holders of the Society's certificate and the graduates of the Royal College, and its evil effects sometimes rendered evident even beyond the circle of professional life. We need not now inquire how it came to pass that an agricultural society began to grant certificates to practise veterinary medicine, nor how the issue of these certificates was continued for so many years, apparently to the injury of the profession—for so long as they were issued unity was impossible, and without this unity important objects had to remain in abeyance. Such a retrospect, though it would teach a valuable lesson, never to be forgotten, is unnecessary here. Suffice it to say, that when the Society threw its ægis over veterinary medicine in Scotland, the profession had but little power in the conduct and management of its affairs, and the Royal College was considered to be but the appanage of a school. It was not then understood that the profession should not exist for the schools, but the schools for the profession. Consequently, school political influence operated most perniciously against the interests of men who had long ceased to be either schoolboys or students; and the Society was amply justified in the course it took, in at least protecting a rival competing school and its graduates from this malign influence. But at last this untoward state of affairs disappeared, when men of independence, loyal to their calling, and anxious to act justly and fairly to the schools and the profession, were elected to the Council of the Royal College. For some time that Council has been a fairly representative body, and its efforts have been energetically and unceasingly made in the direction of progress. The Highland Society's certificate had therefore become not only an anomaly—as its *raison d'être* had disappeared—but its existence was detrimental to this progress, and prevented the attain-

ment of at least one object upon which the profession had set its heart —the obtainment of a Penal Clause for the protection of its title. An everlasting debt of gratitude is doubtless due to the Society for the care with which it fostered and encouraged veterinary science in Scotland, while that science was in its infancy, and its development was clouded by many doubts and dangers. Under the auspices of that influential body much good has been achieved, and that of a permanent and public character; and if it needed any justification for the course it adopted towards the middle of this century, it might point with some degree of pride, to a long list of names of men who have held its certificate, and who have well and worthily upheld the dignity, while they have enhanced the value, of veterinary science.

And grateful recognition of its more recent action cannot be withheld. By agreeing to abolish its examinations and cease giving its certificate, it removes the greatest—indeed, the only barrier to professional unity in these kingdoms. In acceding to the wishes of those who were most deeply interested in our onward movement, it has rendered us a great service, and given truthfulness and reality to the motto of our corporation—*vis unita fortior*. We sincerely hope that, in resigning its functions in this direction, it may still continue to give countenance and encouragement—both of which are greatly needed—to our science. The relationship between veterinary medicine and agriculture is most intimate, and in direct proportion as the former is improved, so does the latter benefit.

By the addition to the register of the Royal College of the names of those gentlemen who have hitherto only held the certificate, the profession gains greatly in numbers, but its largest gain is in unanimity. There are now no divided professional interests, no occasion for party jealousy or ill-feeling. As one body, objects which were before unattainable are now within reach. Those who will soon, we trust, appear as of us and be with us, have the same aspirations as ourselves; and many of them, we are certain, from personal knowledge, are as keenly alive to the interests of the profession—scientifically and socially, as the most earnest and enthusiastic among us.

Another source of congratulation is to be found in the fact, that there will only be one portal of admission to the profession; and that is an advantage of no mean order. It is an advantage which the medical profession—with its multitudinous and injuriously competing examining boards—has long been striving to obtain, but hitherto without avail. It is for us now to make the most of our advantages in the way of improvement. Much, very much, remains to be done: in fact, we are almost at the commencement of our career as a profession. Now that professional unity has been obtained, there should be no check to our progress. With the history of the past before us, we can avoid those shoals and reefs which have already caused us shipwreck and delayed our course. Our future is in our own hands, and we have no apprehensions as to what it shall be, so long as we are true to ourselves.

THE TITLE OF VETERINARY SURGEON.

THE editorial article which appeared under the above heading in the *Journal* for October has attracted much attention, and has received, on the whole, a large share of favourable criticism. It is now pretty generally acknowledged that, no less for the welfare of the profession than the interests of the public, a legal and penal distinction should be made between those who have studied at some recognised veterinary school for a prescribed period, and are graduates of the Royal College of Veterinary Surgeons, and those who cannot furnish this guarantee of educational fitness, but who may, and do, nevertheless, adopt the title conferred upon the qualified practitioners in order to distinguish them from the unqualified.

Our excellent contemporary *The Field*, in its issue for October 26th, appears to agree with all we have urged in this direction, but seems to contest our claim to the exclusive right to the title of Veterinary Surgeon. Acknowledging the necessity for professional protection, and quoting what we have said as to obtaining an Act of Parliament, the writer adds :

"No doubt can be entertained as to the effect of such an Act ; but is it in the remotest degree probable that Parliament will give extraordinary and arbitrary powers of the kind proposed to any body of professional men? The title 'veterinary' is of ancient origin. Hurtrel d'Arboval, as quoted by Blaine, says, '*Veterinaria* and *Veterinarius* are terms which the Romans often employed—the first to designate the medical art as applied to lower animals, and the second those who practise it.'

"'Veterinary Surgeon' was a common title in this country long before the charter attempted to make it the exclusive property of members of the College ; and we apprehend that the man who attends to the diseases of cattle and horses will always be in the public mind associated with the term 'veterinary,' in spite of charters and Acts of Parliament.

"Notwithstanding the difficulties we have suggested, we are satisfied that, in the interests of the large section of the public who are concerned in the management of animals, some legislation is necessary to insure that a clearly defined line of separation should be drawn between the qualified and unqualified practitioner of the veterinary art. We do not assume a right to dictate to the veterinary profession the proper course to pursue for the attainment of this object—in fact, we treat the question from the stock-owner's point of view; but we venture to suggest that some other title than that of Veterinary Surgeon should be chosen before any attempt is made to acquire an exclusive right to it, with power to inflict penalties on those who adopt it illegally. We make the suggestion under the conviction that the term 'Veterinary Surgeon' has so long been, by public consent and the might of possession, the property of all who treat the diseases of animals, that it will be useless to try to divert it to a section of those persons, however good their claim may be. At present a man may call himself a member or fellow of the College, or even president of the institution, without incurring any penalties ; and it could not be said that a claim to have these titles protected by Act of Parliament is unreasonable. One good result which would follow the introduction of an Act for the purpose set forth by the *Veterinary Journal*, is the calling of public attention to a subject which has been allowed to remain in obscurity too long. The only objection to an experiment of the kind is its cost ; but, if the profession is in earnest in the matter, this difficulty need not be insurmountable."

We venture to suggest that our esteemed contemporary is in error with regard to the designation of "Veterinary Surgeon" being of such antiquity as to justify its retention by unqualified men, and compel members of the profession to seek for some other title—a proceeding which, it is scarcely necessary to point out, would indeed be fatal to the existence of veterinary

science in this country. It is true that the Romans employed the terms *Veterinaria* and *Veterinarius*, and that other peoples subsequently adopted them; but there is not a tittle of evidence, we believe, which can be adduced to prove that *Veterinary Art* or *Veterinary Surgeon* were terms in use before the establishment of veterinary schools in this country. For a long time previous to that period we can find nothing mentioned but the *Art of Farriery*, and the designations of *Farrier*, *Cow-leech*, etc., applied to or assumed by those who treated the diseases of animals. It was not until 1790, in fact, that the term *Veterinary* was introduced into our language, from France, where it had not been long popularised: the occasion of its introduction being the assembling of a committee of the Odiham Agricultural Society at the Blenheim Coffee House, London, in that year, when the following resolution was decided upon:—"That this meeting, highly sensible of the great benefit that must result to this kingdom from an institution to cultivate and teach veterinary medicine and surgery therein, and also of the plan proposed to them by M. St. Bel (in the views and utility of which they fully concide); they therefore resolve that a committee, consisting of four gentlemen, be requested to confer with him, and to consolidate, if possible, their intentions with his views." This conference led to the institution of The Veterinary College of London; and we have no reason whatever to doubt that then only was the designation applied to the *alumni* of that school, and not to those who had not studied therein. Indeed, for some years after the commencement of the present century the designation was scarcely known, and when employed it was generally ridiculed; while that of *Farrier* was most popular, and is even now often applied to qualified members of the profession. We cannot discover a book treating of the diseases of animals, and published in this country before the end of the last century, in which the term *Veterinary* occurs; and on the Continent it was not until Bourgelat founded the school at Lyons that it was in use there.

The designation of "Veterinary Surgeon" is, therefore, quite a recent introduction, and its employment was coeval with the establishment of the first veterinary school in Britain—it being conferred upon the graduates of that school, and applied to them only. In recent times, when it has been adopted by the unqualified, it was only with a view to impose upon the public, as they who usurped the title were quite aware that they had no legal claim to it.

The exclusive right of the graduates of the Royal College of Veterinary Surgeons to the title of Veterinary Surgeon, has never, we believe, been seriously disputed; and in the charter by which the profession was first made a corporate body, and which was granted in 1844, we find that this right is amply recognised in the following terms, to which we would direct the attention of the Editor of *The Field*: "AND WE DO FURTHER DECLARE AND GRANT, that the Veterinary Art as practised by the members of the said body politic and corporate shall be henceforth deemed and taken to be and recognised as a profession, and that the members of the said body politic and corporate *solely and exclusively of all other persons whomsoever* shall be deemed and taken and recognised to be members of the said profession or professors of the said art, *and shall be individually known and distinguished by the name or title of Veterinary Surgeons.*"

It will therefore be seen, from the facts adduced above, that graduates of the Royal College of Veterinary Surgeons alone have the prescriptive and legal right to the title of "Veterinary Surgeon," and that its assumption by unqualified men is an infringement of the rights of the profession. As to the improbability suggested by *The Field*, that Parliament will give extraordinary and arbitrary powers to any body of professional men to protect their title, it is surely forgotten that every other profession except our own is

protected by penal enactments. No one can adopt the title of Barrister, Solicitor, Physician, Surgeon, or other recognised profession, without coming in contact with a penal law; and yet, if prescriptive claim to the designation of Physician, Surgeon or Apothecary is to be an argument against such a law, then medical men and apothecaries have no right to protection, as medicine and surgery were practised, medicines dispensed, and the titles of Physician, Surgeon and Apothecary in use, long before charters or penal enactments limited these designations to those who had undergone a certain course of study, and had given evidence of their competency.

To ask us, at this time of day, to choose some other title than that which is prescriptively and legitimately our own, and the only one by which we are known to the public and the Government of the country, is surely demanding that which cannot be surrendered, unless we are willing to undergo extinction, and to allow the empiric and impostor to occupy our place. Our title, however inappropriate its etymological derivation may be, cannot now be changed. Scientific animal medicine in this country began with the title, and with it its progress and utility have been identified. We feel certain that Parliament will readily grant the title full protection, Her Majesty's Government having in our two charters, and on other occasions, recognised it as the special and exclusive designation of members of the Body Corporate.

We are inclined to think that the Editor of *The Field* has not been sufficiently acquainted with all the facts of the case, when he states that the "term 'Veterinary Surgeon' has so long been, by public consent and the might of possession, the property of all who treat the diseases of animals, that it will be useless to try to divert it to a section of those persons, however good their claim may be." The history of veterinary medicine is but a brief one, so far as England is concerned, and a small amount of inquiry will, we feel assured, convince him that the term has never been, either by public consent or the might of possession, the property of *all* who have ministered to the diseases of animals. With this fallacy disposed of, we shall welcome his assistance in the attempt to obtain protection for ourselves and the public, by making it penal for any unfit or improper person to designate himself a Veterinary Surgeon.

THE NATURE OF "BLACK-QUARTER" (*EMPHYSEMA INFECTIOSUM*) IN CATTLE.

THE occurrence of the malady among stock—chiefly young and fast thriving cattle—known to breeders and graziers by various names in this country, but chiefly as "Black-quarter"—is far from being uncommon, and it sometimes causes quite serious losses. Its pathology does not appear to have been very carefully investigated in England, and doubts have been frequently expressed as to its nature.

Bollinger, of the Munich Veterinary School, in the first volume of the *Deutsche Zeitschrift für Thiermedicin* (fourth part), notices it; and we will give his remarks for the benefit of those of our readers who are anxious to learn the results of investigations into the pathology of destructive and incurable diseases.

Bollinger, in the above admirable veterinary journal, informs us that under the designations of *Milzbrandemphysem*, *Rauschbrand*, *Geräusch*, *Fliegendes Feuer* and *St. Antoniusfeuer*, several forms of Anthrax are described in Germany, but which designations are really applicable to only one form, characterised by the formation of emphysematous carbuncle.

This remarkable disease, which until recently has been little investigated, prevails in certain regions of the Bavarian Alps, and is also enzoötic in Switzerland; it is most frequent in summer, and seldom appears in winter. According to the reports of trustworthy observers, it manifests itself sporadically, and is chiefly distinguished by acute emphysema of the skin and muscles; it always terminates fatally. The disease is never transmissible, and the flesh of the affected animals is perfectly innocuous as human food; it is habitually consumed, with the exception of the part affected. Whenever the disease is recognised, the cattle are immediately killed, because of the hopelessness of recovery. More particular information—particularlv of a clinical and anatomo-pathological kind—is required, in order to arrive at more definite conclusions with regard to some important points in its pathology.

While Professor Bollinger was at Zurich, a portion of an ox which had evidently suffered from "Rauschbrand" was brought to him for examination. This consisted of the muscular part of the hind leg, which was about as large as a man's head; it was excessively emphysematous, and when cut into or handled gave out a very marked crepitation; it had also a peculiar brownish-red (imbibition-red) colour, and in places there were hæmorrhagic patches; the mass had a rather unpleasant odour. When the turbid, blood-tinted moisture from the muscle was examined microscopically, numerous masses of *Bakteria* were observed, which had no resemblance whatever to those of Anthrax, but which Bollinger regarded as putrefaction *Bakteria*. As nothing could be learned with respect to clinical particulars, nor to the history of the animal, the investigation had but little result.

In January 1875, however, the district veterinary surgeon of Füssen, Upper Bavaria, sent him some blood from a young cow which had to be killed in consequence of being attacked with this "Geräusches" (which really means *crackling* or *crepitating* disease). The sender requested a microscopical examination of the fluid, in order to ascertain whether the characteristic *Bacteridiæ* of Anthrax were present, and thus to settle the question as to whether the disease was Anthrax. The blood, which was examined on the 25th of that month, did not offer anything unusual to the naked eye; it was of a light-red colour and normal consistency, and a microscopical examination yielded only negative results. There were no *Bacteridiæ;* the red corpuscles presented their usual appearance, and the number of white corpuscles was not increased. With this blood two rabbits were subcutaneously inoculated, but they remained quite healthy, and did not appear to suffer any disturbance whatever. So that no definite conclusion could be arrived at as to its anthracoid nature. But taking into consideration the facts just noted, also that the malady always appears sporadically, that it is never transmissible, and always terminates fatally, and, what is more, that the flesh can be eaten with impunity, Bollinger was led to the conclusion that this is not a real anthracoid affection, though simulating it. He had examined a large number of cases of Anthrax in different animals, and found emphysematous carbuncle. And though serious outbreaks of Anthrax had occurred on the Bavarian Alps, yet this particular affection was no more frequent than usual.

In a communication to the Morpho-Physiological Society of Munich on June 12th of the present year, and published in the *Aertzlichen Intelligenzblatt*, also in the *Wochenschrift für Thierheilkunde und Viehzucht* for last August, Bollinger returns to the subject, and consequently we have his most recent views.

In certain districts of the Bavarian Alps, he states, and especially in those of Werdenfels, as well as in the Anthrax districts of these Alps,* Anthrax

* Report of Professor Feser on the Distribution of Anthrax Diseases in the Bavarian Alps.

makes its appearance every year—most frequently in the hot months,* as a remarkable enzoöty among cattle, known as "Rauschbrand," "Gerausch," "Rauscher," "Milzbrandemphysem," "St. Antoniusfeuer," etc. It also occurs in other districts in an enzoötic form: for instance, in Unterfranken (near Hassfurt), and in North Baden (where it is designated "Schenkel" or "Hinterbrand"), as well as in certain regions of Switzerland (Glarus, Graubünden, the Bernese Alps, and Jura), where it is known as "Plag," "Kroser," "Gerausch," etc. Hitherto, this mysterious disease has been almost universally looked upon as a form of Anthrax—*Anthrax Emphysema;* but recently Professor Feser has classed it with the septic diseases.

About a hundred head of cattle died annually on the Bavarian Alps, and on many pastures from 1 to 5 per cent. of the herds generally perished.

The essential and characteristic feature of the disease is an acute emphysematous condition of the subcutaneous and muscular tissues, accompanied by a sero-hæmorrhagic infiltration of the affected part, and particularly the posterior extremity. Sometimes the emphysema extends over the entire body, the animal generally dying on the first or second day. So far as our present knowledge extends, it does not attack mankind, nor yet other than bovine animals.

In the year 1875, experiments proved that the malady was not Anthrax, as rabbits could not be successfully inoculated, neither was anything unusual discovered in the blood when that fluid was examined microscopically.

Professor Hahn has lately reported that a steer was affected with the disease at Freimann, near Munich, in a stable in which many cases occurred the previous year. This afforded a good opportunity to try some inoculation experiments, and so to arrive at some conclusion with regard to this strange zoönosis. By these experiments with the blood of the sick steer, we produced the characteristic phenomena of the disease in different animals—two bullocks, two sheep, one goat. We took the blood, partly *intra vitam* and partly *post mortem*, from the diseased animals, and subcutaneously injected from two to twenty-five drops, which caused death in from twenty-one to thirty-three hours; the inoculating fluid retaining its virulency during five generations (or successive transmissions). The characteristic sero-hæmorrhagic infiltration and emphysematous condition of the subcutaneous and muscular tissues were quickly developed; they were accompanied by fever. The gas, which was generated subcutaneously in the living animals, was collected and examined by Professor Forster, and found to be odourless; it burned with a bluish flame, and probably consisted for the most part of carburetted hydrogen (CH_4).

In the *post-mortem* examination of the inoculated animals, the entire phenomena of the disease were accounted for. The emphysema extended to all the soft tissues in the vicinity of the point of inoculation, and to such a degree that the limb attained twice its normal size; while the emphysematous muscular tissue was saturated with a thin lake-coloured and gas-generating blood, a section of this tissue presenting a spongy appearance. Bubbles of gas were noticed everywhere in the blood; the lymphatic vessels had a beaded appearance, due to gas bubbles, and the lymphatic glands in the affected part had a similar appearance. The liver, spleen, kidneys and lungs were also more or less emphysematous, but the spleen was not enlarged.

Bacilli† about five micromillimeters in length, having a peculiar rotary motion around their long axis, were found in the blood of the affected part,

* Of 415 cases which occurred in the Bavarian Alps and in the Canton of Glarus, 368 were observed between the months of June and November, and only 47 between December and May.

† The short motile *Bacilli* observed in this disease had already been described by Professor Feser.

as well as in that of the body generally. The phenomena of putrefaction were absent in the dead animals, even when kept for one or two days, in a cool place.

After the transmissibility of the disease was established, it was tried to produce it through the digestive organs. A calf was fed with blood derived from one of the before-mentioned calves which had died from the effects of inoculation; no result followed within forty-eight hours, but after the lapse of fifty-three hours of this feeding, the animal suddenly died. A macroscopical examination yielded only negative results, instead of the expected intestinal emphysema. By means of the microscope, however, the short motile *Bacilli* were detected in the large posterior veins.

In order to be quite certain as to the condition of the animal, a sheep and goat were inoculated by subcutaneously injecting some of its blood. Both animals died—one in twenty, the other in twenty-one hours—with all the characteristic symptoms of the disease; the emphysema extending from the seat of inoculation; thus proving that a calf fed with the blood of animals affected with the malady will also become affected and die, but without any local lesions being apparent before or after death.

Virulent blood was injected into the rectum of a calf, but without result. Afterwards a rat and mouse were inoculated with an extremely small quantity of the blood; they both died within twenty-four hours. At the autopsy there were no indications of emphysema at the inoculated part, although *Bacilli* were found in the blood. Some of the flesh of an animal which had died of the malady was given to fifteen white mice, but with negative results.

Bollinger gives the following as the most important conclusions derived from the above experiments:—

1. That the disease is neither a form of Anthrax, nor a septic or putrid infection, but—

2. It may be considered as a *Mycosis* of the most dangerous kind, which always terminates fatally. Rabies may also be looked upon as belonging to the same class, though it differs from it so far as rapidity of course is concerned.

3. The infecting element is, in all probability, a motile cryptogam (an aerogenous *Bacillus*) which is endogenous in the body of the diseased animal; and—with regard to its enzoötic prevalence on certain pastures—it is also ectogenous.

4. The disease, like Anthrax, belongs to those diseases which may be transmitted by the soil. Considered with regard to its transmissibility, it is not contagious. Therefore the term "miasmatico-contagious" is just as inadmissible when applied to this disease as it is to Anthrax.

5. The infecting material is not only active when introduced into the subcutaneous tissues, but also when it gains access to the intestinal tract—as is also the case with Anthrax.

6. The disease can be artificially transmitted to cattle, sheep, goats, rats and mice; though cattle are only spontaneously or naturally affected during its enzoötic outbreaks.

7. When animals are infected through the digestive canal, the disease may run its course without local manifestations, as a pure Hæmatonosis—much the same as with the exanthem of Variola or Anthrax without localisation.

8. As a scientific designation for the malady, we would recommend the employment of "*Emphysema infectiosum*."

In concluding our notice of Professor Bollinger's valuable researches, we may note that the Bavarian regulations with regard to epizoötic diseases, in treating of Anthrax, include the so-called "Erysipelas" in pigs and this

malady; and direct that the measures prescribed for Anthrax are also to be applied to these affections, but only when they exhibit the *real* characters of that Protean disorder.

THE TEXAS CATTLE DISEASE.

WE have on several occasions noticed the prevalence of the so-called Spanish Fever, or Texas Cattle Disease, in certain parts of the American continent and the serious destruction it was causing. From a report of Commissioners on Contagious Diseases among Cattle, presented to the Massachusetts House of Representatives on January 8th, we extract the following reference to the malady :—

"The law of 1876, to prevent the recurrence of Spanish Fever by the importation of cattle direct from the plains of Texas, and the measures instituted by the Commissioners to give information respecting the same, and for its enforcement, resulted that year in their exclusion, and, as was believed with the ready acquiescence or co-operation of both cattle-dealers and transporters.

"The good effect of the law was so apparent, and its provisions were supposed to be so generally understood and approved, that the Board did not deem it necessary, the present year, to again call public attention to it, or warn individual parties against its infringement. But through ignorance, or intentional disregard of the enactment, sundry persons have brought small numbers of the interdicted animals within the State; though the fact was not ascertained until after they had been slaughtered, and such proof as was desirable for conviction under the law not attainable. We have reason to believe that cattle of this kind were transported by car to the Union Stock Yards in Watertown, and driven thence by public road to Brighton; because native cows, driven to pasture over that route, contracted and died of Spanish Fever.

"Texans were taken from the cars of the Boston and Albany Railroad in Worcester, and driven thence two miles to the place of slaughter; and a native herd, which was driven on the same road subsequently, or grazed on a field which the Texans invaded, were attacked by this disease, to the number of twenty, eleven of whom died. A citizen of Upton, in Worcester County, procured a few of the same for beef; and they communicated the disease to his home stock, which resulted in the loss of eight animals.

"The transactions in this class of stock during the warm season have been small indeed; but they have resulted in the loss of more than twenty choice natives; and the entire damage has been more than twenty-five hundred dollars—a sum which, though comparatively small, should serve as a danger-signal to all interested in the cattle trade, and stimulate the Board to be more alert in future.

"Spanish Fever has caused suffering and immense loss in the Western States during the summer; and for a time it was hazardous for our dealers to purchase the native animals of those States, lest they might have been exposed to the disease while in transit, and loss caused by its subsequent development. The attention of the Board was called to a case of this character. A farmer of Great Barrington, in Berkshire County, purchased a drove of cattle, natives of Ohio, and transported them to his home over the route usually taken by Texans. Most of them contracted the Fever, which afterwards developed, causing the owner much loss, and creating public alarm, though the disease was confined to that herd.

"The operations of this disease at the West, and our slight observation of it during the year, have served to confirm the Commissioners in their oft-repeated opinion of its peculiar mode of transmission and dangerous character, and justify the legal enactments of the Legislature to prevent its introduction to the State. Of the sum of $500 appropriated by the Legislature of 1876 for the purposes of the Commission, $45·35 was expended in defraying the expenses of 1875, and $62·60 was expended in 1876. The remaining sum of $392·05 by law now reverts to the general treasury. If, during the present year, an exigency should occur requiring action and expenditure by the Commission, they would be powerless. Therefore, as a measure of precaution and safety, they recommend to the Legislature to make a small appropriation, to be used by them in accordance with the provisions of the law."

In May, 1876, there was passed "An Act to Prevent the Recurrence and Spread of Spanish Fever, or Texas Cattle Disease," in Massachusetts, in the following terms :—

"Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, as follows :—

"SECT. 1. Any person, company, or corporation which shall drive or transport into this commonwealth any Texas or Cherokee cattle, between the fifteenth day of May and the first day of November of any year, shall be punished for such offence by a fine of not less than twenty, nor more than one hundred, dollars for each animal so transported or driven : *provided*, that if the person, company, or corporation so driving or transporting such cattle shall prove that the same have been kept in some place north of the Ohio or Missouri rivers from the first day of December to the first day of May next preceding such driving or transportation, then such person, company, or corporation shall not be liable to the above penalty.

"SECT. 2. For the purposes of this Act, the term Texas or Cherokee cattle shall be construed to mean the native born and bred cattle of the states of Texas and Louisiana, or that class or variety of cattle known and designated by that name by traders and dealers in cattle.

"SECT. 3. It shall be the duty of the Board of Cattle Commissioners to carry out and enforce the provisions of this Act; and they are hereby authorized to make all necessary regulations therefor."

RABIES AND HYDROPHOBIA IN FRANCE.

THE French Minister of Agriculture and Commerce has recently issued a circular addressed to the Prefects of the Departments in France, containing instructions for the prevention and suppression of Rabies. These instructions are mainly, if not entirely, those we suggested with the same objects, in "Rabies and Hydrophobia," published in 1872. The *Lancet* and some other medical journals have given a translation of the French Minister's Circular as something novel, but have overlooked or ignored the fact that a member of the veterinary profession in this country had, six years ago, made public the measures it ordains.

Proceedings of Veterinary Medical Societies, etc.

THE EDINBURGH VETERINARY COLLEGE.

On October 23rd the winter session of the Edinburgh Veterinary College was opened in the City Chambers, in presence of a large number of students and others. The Lord Provost presided; and amongst others present were—Councillors Sloan, Turnbull, and Milne, Edinburgh; Councillors Waldie and Bennet, Leith; Principal Walley; Professors Baird, Cunningham, and M'Fadyean; Mr. Rain, Kingston; Mr. Roberts, Wrexham; Mr. Reid, Leith; Mr. George Watt, Kilmany; Mr. Alex. Gillespie, Kirktonbarns; Mr. James Slimon, Mr. H. M. Yeats, etc.

The Lord Provost, on taking the chair, said he had great pleasure in being present at the opening of the session. It was gratifying to think that the College had a most efficient and energetic staff, and that everything connected with it had for some years past worked most satisfactorily. The high anticipations that had been formed when the present staff was appointed had been more than realized. It was very pleasing to think that for some years the number of students had been steadily increasing, and he understood that this year a very large increase was anticipated. Indeed, there were that day enrolled a larger number of students than there had been on the opening day for a considerable time before.

Principal Walley then delivered an address. After some preliminary remarks, he said:—"Prominent amongst the changes which have taken place during the past year are those in connection with the army and the Legislature. The position of the army veterinary surgeon has hitherto been of a very unsatisfactory and unremunerative character, and for many years no effort was made by those in authority to remedy this; but we have now, fortunately for the profession, gentlemen at the head of affairs who are thoroughly cognisant of the injustice of the past, and quite determined to do their utmost to redeem it in the future; and though they may not have succeeded in making the recent changes satisfactory to all concerned, they have broken through the ice of officialism, and have paved the way for further action when opportunity offers. Certainly, as has been recently pointed out by a writer in the *Veterinary Journal*, the changes, so far as junior veterinary surgeons are concerned, are not so favourable as they appeared at first sight to be, but in due course those who may join under the New Warrant will reap the benefit of what has been accomplished. The provisions of the Warrant will effectually prevent that stagnation which has for so long been the bane of many army veterinary surgeons, from having no stimulus to improve themselves in the scientific details of their profession—as none but competent men can now hope to gain entrance to the army, or, if they should do so, to remain in it for any length of time. The system of retiring allowance, so far as I can judge, is also much more liberal than formerly. But while acknowledging that something has been done for the benefit of army men, we must not overlook the fact that much more is demanded of them than heretofore, especially in the way of entrance tests. That a great necessity existed for a radical change in this direction, nobody acquainted with the subject can deny; but I think that, in face of these extra demands, as compared with the benefits to be derived from an army career, the New Warrant will not be the means of inducing the best men to come forward, particularly as other and more lucrative openings are offering themselves almost daily. In connection with the legislation of the past session in reference to the contagious diseases of animals, the veterinary profession is most justly and deservedly acknowledged, and the anomaly of 'inspecting police-constables,'

or other unqualified persons, except as assistants or supernumeraries, has been done away with—at least in England and Scotland, and to some extent in Ireland. At one time I, with others, was afraid that those gentlemen holding the certificate of the Highland and Agricultural Society of Scotland only would be placed outside the pale of veterinary inspectors; happily, by the earnest endeavours of the Scotch members of Parliament and some gentlemen holding important positions in the Highland Society, this injustice has been averted. When I tell you that, whilst looking up statistics for the use of Mr. Mylne, I found that of the veterinary surgeons practising in Scotland no less than two hundred or thereabouts were in possession of the single qualification only, you will see how great would have been the injustice had these gentlemen been debarred from acting as veterinary inspectors. More than this: had the qualification of these gentlemen not been acknowledged, more than one local authority would have found it very difficult to carry out the provisions of the Act, as in many districts no M.R.C.V.S. is to be found, and some of the authorities would have had to pay an independent and comparatively large salary to a M.R.C.V.S. With the Contagious Diseases Act we have other reasons to be satisfied, as it takes cognisance of and embodies in its provisions many arguments which have been used by veterinary surgeons for some years past; and we may hope that if it does not actually exterminate, it will very considerably moderate, those diseases of animals which have been for so long a curse and a scourge to stockowners. I think I may speak for all my brethren when I say that the members of the Privy Council will receive every assistance in their endeavours to cope with disease from the veterinary profession. One great difficulty has not been surmounted: and that is, the difficulty of dealing with infected markets and fairs; as, although the Privy Council has modified powers in this respect, yet, as a rule, if one or more diseased animals are discovered in a market or fair, all the others which have been associated with it or them will be allowed to go scot free—probably to carry disease to many previously healthy centres. But, notwithstanding this defect, the Bill cannot but be pronounced as an eminently useful measure, and though some of its provisions may at first appear hard, it will ultimately prove for the good of all concerned. The humanitarian aspect of our profession has been nobly supported by Mr. James Cowie, of Sundridge Hall, who, backed by the moral support of some five hundred British veterinary surgeons, and accompanied by his daughter, undertook to plead the cause of the equine race before the French authorities; and so successful was his pleading, that the responsible head of veterinary matters issued an edict which will effectually prevent the harrowing scenes and the barbarous cruelties which have been so common in French veterinary schools. While the humanitarian spirit of the profession has been active, the utilitarian has not been slumbering. Not long ago, in this chamber, I endeavoured to show that the mission of the veterinary surgeon was not simply a curative one, but pre-eminently preventative. The Contagious Diseases (Animals) Act is one effort in the prevention of disease; but in reference to one malady—*i.e.*, Zymotic Pleuro-pneumonia—there have not been wanting individuals who have strained every nerve to endeavour to arrest its spread by a purely medico-surgical measure—viz., by inoculation. Foremost, perhaps, amongst these workers has been our fellow-citizen and old *alumnus*, Mr. Richard Rutherford. Inoculation has for a tolerable number of years, in different parts of the world and at various intervals, been resorted to with the object of rendering the systems of domestic cattle proof against the virus of Zymotic Pleuro-pneumonia; and while there are many who deny its utility, there are others (and they are the majority) who speak highly of its beneficial effects. Having had the advantage of a colonial experience, and knowing the strong opinion in its favour entertained by his

friend Mr. Graham Mitchell, of Melbourne, Mr. Rutherford has during a greater part of the year been perseveringly and assiduously labouring to eradicate Pleuro-pneumonia from the byres of Edinburgh and Leith. Personally, I can vouch for the fact that the disease has declined to a very great extent during the past six months; but some little time must yet elapse before we can definitely say whether this is due entirely to inoculation, or, to some extent at least, to the operation of a well-known law which is peculiarly applicable to Zymotic Pleuro-pneumonia—viz., 'the law of periodical decline.' Whatever the future may decide, one thing at least will Mr. Rutherford have deserved, and that is the hearty thanks of everybody connected with cattle for the perseverance and energy with which he has prosecuted the inquiry, and for his endeavours to get rid of a disease which is in every sense an unmixed evil. Having briefly glanced at some things which have been accomplished, I must dilate for a short time upon a matter which is only in process of being accomplished—I refer to the negotiations at present pending between the R.C.V.S. and the Highland Society, and which, if carried out, must exercise a powerful influence on the future of the veterinary profession. These negotiations have for their object the suspension of the veterinary examinations of the Society, and the admission into the body-corporate of all gentlemen holding its certificate by the payment of a moderate fee, and without examination. As so little is known of the relations which have subsisted for so long a period between the Highland Society and the veterinary profession, it will be profitable here to take a glance at them. I need scarcely remind you that these relations were first originated by the founder of our school, the late Professor Dick, who, as some of you know, struggled for some time, against many discouragements, to plant the flag of the profession on the 'soil of his 'ain bonnie Scotland.' In the year 1819 Professor Dick first commenced to give lectures on veterinary subjects in this city; but it was not until the spring of 1823 that the Highland Society recognised his efforts, and gave him substantial aid—following this up in 1838 by the obtaining of a recognition of the eligibility of his students for commissions as veterinary surgeons in the home and East Indian armies. In the year 1844, owing to the obtainment of a charter by the R.C.V.S., the certificate of the Highland Society was suspended, and continued in abeyance until 1848, in which year Professor Dick, being justly dissatisfied with the treatment he had received from the R.C.V.S., obtained the resuscitation of the Highland Society's examinations and the re-issuing of its veterinary certificate, which received Government recognition up to a comparatively recent date. Since that time the Society has continued to grant its certificate to successful candidates; and there are now upwards of 350 practising in different parts of the world with this qualification alone. On two separate occasions the Highland Society has endeavoured to obtain a charter empowering it to grant diplomas in veterinary medicine and surgery, but without success. In July last year the suspension of the Society's veterinary certificate was seriously mooted (mainly by holders of the certificate) at the conjoint meeting of the Midland Counties Veterinary Medical Association which was held at Liverpool. About the same time, too, the President of the R.C.V.S., at a Council meeting held in London, gave notice of his intention to bring forward a motion having for its object the admission of holders of the Society's certificate as members of the body-corporate on their passing an examination in the several subjects comprised in the second and final examinations for the diploma and paying a certain fee. Whatever may be the result of the present movement, I feel confident that the Highland Society will not withdraw its assistance from a profession whose growth and prosperity it has done so much to foster and encourage. We have much to thank the Highland Society for in the past; may that indebtedness be

repaid by the onward progress of our calling in the future! I cannot leave this subject without embracing the opportunity of introducing to the notice of those more immediately concerned a matter which is intimately connected with our institution, and which has for some years been allowed, most unjustly and undeservedly, to slumber,—I refer to 'The Dick Memorial.' During the summer the subject was brought under the notice of my colleagues and myself by Mr. Mylne, of Niddrie Mains; and on making inquiries, in conjunction with that gentleman and Mr. Melvin of Bonnington, I find that in the year 1866 a movement was originated with the object of securing to Edinburgh a suitable memorial of the late Professor Dick. Subscriptions were solicited, and a sum of over £300 was promised; of this sum about £185 was collected, but it has been reduced (by expenses) to about one-third its original amount—viz., £62 4*s.* 8*d.* The reasons offered for the abandonment of the scheme are anything but satisfactory, and show how the claims of a public benefactor to public recognition may be obscured and set aside by private quarrels and dissensions. The ultimate disposal of the balance of the fund remains to be determined; but I sincerely trust that we shall be able, by the assistance of those who truly revere the memory of Professor Dick, to devote it to some good and laudable purpose." Principal Walley concluded by giving some useful advice to the students.

Councillor SLOAN (who presided during the latter part of the proceedings) said he was sure that they had all listened with very great pleasure to the interesting address by Principal Walley. As to the late Professor Dick, he thought that the best memorial to him was the splendid College, in which they were all interested. He hoped that the present session would be one of great success; and there was good reason why it should be so, as there was not a more efficient staff of professors connected with any institution of the kind in the kingdom.

Councillor TURNBULL said that he was sorry that the fund raised for a memorial to Professor Dick had diminished so much, as he was a man whose services ought not to be lost sight of. The fund ought rather to have increased than diminished, and he hoped that something more would be done in regard to it. He would like to know the reasons for the diminution of the fund.

Mr. HARRIS (clerk) said that he was not aware of the existence of the memorial fund until about two months ago, when Principal Walley was kind enough to send him some old documents referring to it. The fund was originated long before he had any official connection with the College or its affairs. In looking over the list of subscriptions, he found, in the first place, that a large proportion of the original subscribers were dead or removed, so that what they had subscribed might be looked upon as lost. Besides, in speaking on that subject to some of the subscribers, they said that they had promised their subscriptions under different conditions than those which now existed; and that as their co-subscribers had disappeared, so they might be held as having also disappeared. Furthermore, he found that even of the sum received about two-thirds had been swallowed up in expenses. The trustees, however, had no more knowledge of the matter than he himself had. The subscription was got up outside altogether, so that whatever reflection might be made in regard to the matter, none could rest on the trustees or any of the officials of the College.

Councillor TURNBULL said he was very glad to hear the explanation by Mr. Harris, as it entirely exonerated the trustees. But whoever might be to blame, there was no doubt that blame existed somewhere. A large proportion of the money had disappeared, and he thought that a statement of accounts ought to be rendered in some way or other. He begged to propose a cordial vote of thanks to Principal Walley for his admirable address.

Councillor BENNET, Leith, seconded the motion. He said he sympathised very much with what had been said as to the fund, and he thought that some inquiry should be made as to where the money had gone.

The motion was cordially agreed to.

On the motion of Councillor TURNBULL, a vote of thanks was given to the Chairman, and the proceedings terminated.

GLASGOW VETERINARY COLLEGE.

THE winter session of this Institution was opened on the 23rd of October, by an introductory address by Principal M'Call. There was a large attendance. George Fleming, Esq., F.R.C.V.S., editor of the *Veterinary Journal*, presided; and on the platform were—the Rev. M. Watson; John Graham, Esq., Lambhill; Robert Walker, Esq., Gallowhill; J. G. Sandeman, Esq., Glasgow; Mr. Carlisle, M.R.C.V.S., Carlisle; Mr. Robinson, Greenock; Mr. Pottie, Paisley; Messrs. Brock, Shaw, Prentice, Anderson, Hill, and Houston, Veterinary Surgeons, Glasgow; Mr. Constable, Inchture; Mr. Campbell, Kirkcudbright, etc., etc.

Principal M'CALL, after expressing the pleasure it gave him to meet with the students for the work of another session, said it had always been his custom to advert to a few topics which would have a public as well as a professional interest. Two years ago he referred to the past and present curriculum of students of veterinary science, and to the past and present results of the operation of the Contagious Diseases (Animals) Act. As they had now entered on the second year's experience of the new and extended period of study, and also this present month had had the new Contagious Diseases (Animals) Act placed in their hands for execution, on behalf of the Privy Council and also on behalf of the local authority of Glasgow, he proposed to continue the consideration of these two subjects. The learned Principal then referred to the fact that while previously the course of study for the diploma embraced a period of two winter sessions of four and a half months each, and the passing of an examination in several subjects, now the period of study embraced three winter sessions of over five months each, and two summer sessions of little less than three months each, and the candidates for admission had to pass through three separate examinations of more extended range. Besides, the fees had been raised from sixteen guineas to thirty-six guineas; and there were some who prognosticated that the introduction of this new scheme would be utter ruin to this Institution. Instead of that, he was glad to say that at no other period in its history—both as regarded the number and efficiency of its students and its financial position—had it stood on so broad and firm a basis. The total result of the three years system could not exactly be computed until April next, when the senior students would pass up for final examination to obtain their diploma; but he prognosticated that the result would be satisfactory to all the three parties concerned—to the examiner, the teacher, and the student. Turning to notice the beneficial operation of the Contagious Diseases (Animals) Act, Principal M'Call said the tax of $\frac{2}{3}$nds of a penny to meet the expenses connected with the slaughter and compensation to proprietors of cattle affected with Pleuro-pneumonia had of necessity given rise to a variety of opinions—some thinking that it partook of class legislation. He did not intend to give a dissertation upon that subject. But that certain diseases existed, and had existed for years, and had resulted in the destruction of large numbers of their herds, was admitted by all. Acts of Parliament had been passed, and Orders of Council had been issued; and notwithstanding, they had some diseases which are not indigenous but imported continuing to

exist in our country; and the bare fact that they did exist had been sufficient evidence for large sections of the community to make up their minds that Acts of Parliament and Orders of Council and all connected therewith were utterly valueless, and should be swept away, and a return made to the old system of "do nothing" and "let alone." If they would bear with him, and allow their minds unbiassedly to deal with facts and figures, he believed he could prove to a demonstration that Acts of Parliament and Orders of Council, when allowed to have a fair field and no favour, or, in other words, put in operation and kept in operation according to the spirit and the letter therein contained, could do much to subdue these diseases, if not entirely extinguish them. In Glasgow, under the local authority, the various Orders of Council had been enforced to the very letter; and if the Act had been a failure in this city, he alone was to blame. But how many local authorities had done their duty in Scotland? Not a dozen, and hardly another to the same extent as Glasgow. Every county and burgh had a separate local authority, but the good done by a dozen was swallowed up by the others, and the sum total placed the little at the credit of the operation of the Act as a whole. But if one local authority could show good results from the operation of the Act in its hands, was it not reasonable and right to draw the inference that all local authorities might show to a certain extent a similar proportionate amount of good? He thought so. What, then, were the results obtained through an efficient working of the Act in this city? To arrive at an estimate of its worth, it was well to consider the results of the spread of contagious diseases among the cattle in the byres prior to the passing of the first Act. Until the ever-memorable year of the Cattle Plague—1865—statistics were not available for demonstrating the losses sustained by stock proprietors from contagious diseases. Having been asked to inspect the dairies and cattle sheds within the city bounds, with a view to their being licensed under the Cattle Sheds or Burghs (Scotland) Act, and also to furnish statistics of losses sustained by dairymen during the prevalence of the Cattle Plague, he at the same time availed himself of the opportunity for collecting statistics regarding the losses sustained from Pleuro-pneumonia. And in order to make these statistics of practical use, and to suggest measures for limiting the range of the disease, and also to demonstrate how formidable an enemy they had to deal with, he carried his inquiries as far back as 1853. During the twelve years prior to 1866, in the city alone 3,759 cows died from Pleuro-pneumonia, 1,594 cows were slaughtered on account of being affected with Pleuro-pneumonia, and the actual money lost, although the cows were then considerably cheaper than they were now, was £54,677, which represented an annual loss of £4,556. From 1866 till August 1869, at which latter date the Contagious Diseases (Animals) Act became law, no statistics of disease sufficiently reliable to be founded on could be adduced, but from that time until the present moment he could give day and date for every animal that had died or that had been slaughtered within the burgh of Glasgow affected with Pleuro-pneumonia. From August 1869 till August 1872—three years—258 cows were attacked, 139 were killed, 28 died, and 91 recovered from Pleuro-pneumonia. Making a computation on the same principle as formed the basis of the previous statement, the value of cattle destroyed by this disease during these three years was at the rate of £650 per annum. In other words, for the twelve years prior to the passing of the Act in Glasgow the dairymen lost £4,556 yearly by Pleuro-pneumonia; but since the Act their losses from the same disease up to that date had been reduced to £650 per annum. In 1873 the Privy Council issued an Order making it compulsory on local authorities in England and Scotland, but not in Ireland, to slaughter without delay all the cattle affected with Pleuro-pneumonia, and granting

compensation to their owners at the rate of one-half of the actual value of the animal. Prior to this, compensation had never been granted in Great Britain, although it had been granted on the Continent. In August 1873 he received instructions to carry out the provisions of the Order, and with little variation he continued to do so until the present hour. The result had been that in 1873-4, 203 cows were slaughtered and £1,011 paid in compensation; in 1874-5, 70 cows were slaughtered and £502 16*s.* 9*d.* paid in compensation; in 1875-6, 73 cows were slaughtered and £676 12*s.* 6*d.* paid as compensation; in 1876-7, 111 cows were slaughtered and £712 15*s.* paid as compensation; and in 1877-8, 34 cows were slaughtered and £194 15*s.* paid as compensation. It would thus be seen that for the twelve years previous to the passing of the Act the losses from Pleuro-pneumonia had been £4,556 annually; for the past five years the average was £619, and for the present year £194. In these circumstances he was warranted in drawing the conclusion that the mortality and actual money loss from Pleuro-pneumonia, with or without compensation being awarded, were, under the system of inspection instituted and maintained by the local authority of this city, reduced to one-seventh of what they had been prior to the passing of the Act in 1869, and when the "do nothing" or "let alone" system held sway. Now the new Act allowed compensation to the amount of three-fourths of the value of the animal, and prohibited all movement of diseased animals, or animals that had been herded with diseased animals, within the jurisdiction of the local authority except with their permission; and further closed for fifty-six days premises where disease had existed. He was of opinion that if all local authorities did their duty, the ravages of Pleuro-pneumonia, like those of Cattle Plague, would become a tale that had been told. Principal M'Call afterwards referred to the position of the Highland and Agricultural Society with regard to the profession. For many years that Society had held examinations and granted certificates; but in no clause of its charter had it power to grant these certificates or diplomas in veterinary science. It had acted illegally in doing so; and the document issued by it, however competent the examiners, was an illegal document, and conferred no power of admission to the veterinary profession. There was only one chartered body legally empowered to grant diplomas to veterinary students, and that was the Royal College of Veterinary Surgeons,—all its members, whether educated in London, Glasgow, or Edinburgh, being placed on the same platform by virtue of having the same degree. He referred to the attempts that had been made by the Highland Society to obtain power to grant diplomas, and spoke against the idea of having a Scottish body with such privileges. He was in favour of there being no monopoly in teaching, but he wished to continue the monopoly of granting degrees; for rivalry there meant discord, weakness, and jealousy—the splitting-up of the profession into a number of weak bodies rivalling each other in granting the greatest number of diplomas at the cheapest price. He was, however, glad to tell them that an agreement was being adjusted between the Royal College and the Highland Society, whereby, on certain conditions, all persons holding the Society's certificate would be allowed within the ranks of the profession,—but on the distinct understanding that the Society shall for the future cease to examine or grant any certificates to veterinary students; and that that agreement might be finally consummated ought to be the prayer of every friend of the profession, and of the whole body-corporate. Principal M'Call concluded by giving a few words of advice to the students entering for the first session.

On the motion of the CHAIRMAN, a hearty vote of thanks was awarded to Principal M'Call for his valuable address; and a similar compliment having been paid to the Chairman, the proceedings terminated.

NEW VETERINARY COLLEGE, EDINBURGH.

ON October 23rd, the New Veterinary College at Gayfield was opened for the session with an address by Principal Williams. There was a large attendance of students ; and among others present were—Dr. Dycer, surgeon of Duke of Edinburgh's Own Artillery Militia ; Major Hilson, Mr. J. Gamgee, Dr. Young, Professor M'Alpine, Professor Kitchin, Mr. Macgregor, S.S.C. ; Mr. Cartwright, V.S., Wolverhampton ; Mr. Bell, V.S., Carlisle ; Mr. Thompson, V.S., Aspatria ; Mr. Faulkner, Mr. P. Taylor, and Mr. Hopkin, V.SS., Manchester ; Mr. Borthwick, V.S., Kirkliston ; Mr. Leather, V.S., Liverpool ; Mr. Aitken, jun., V.S., Mr. Aitken, V.S., Dalkeith ; Mr. Balfour, V.S., Kirkcaldy ; Mr. Balfour, jun., V.S., Markinch ; Mr. Johnstone, V.S., Peebles ; Mr. Young, V.S., East Calder ; Mr. Waugh, V.S., Stirling ; Mr. Kitchin, V.S., Cupar ; Mr. Philp, V.S., St. Andrews ; Mr. Hutcheon, V.S., Liverpool ; Mr. Connachie, V.S., Selkirk ; Mr. Lothian, Dunse ; Mr. Callander, Falkirk ; Dr. Carmichael. Edinburgh ; etc.

On the motion of Mr. MACGREGOR, Dr. Dycer was called to the chair.

The CHAIRMAN intimated that letters or telegrams of apology had been received from Sir James Gardiner Baird, Major Boulton, and a large number of other gentlemen, including many from England.

The CHAIRMAN congratulated Principal Williams on the opening of the fifth session of the College. He had by great industry and assiduity overcome many difficulties, and brought the College to the front. By that he had secured the recognition of his services as a successful teacher, and shown that he was in possession of the rare faculty of being able to impart his knowledge to others. His work had become a very extensively used class-book, and he had surrounded himself here with gentlemen eminent in various departments.

Principal WILLIAMS, who was received with loud cheers, said—"In the first place I have to refer to an arrangement, which is now almost completed, between the Royal College of Veterinary Surgeons on the one hand and the Highland and Agricultural Society of Scotland on the other, whereby the latter has consented to discontinue to appoint boards for the examination of veterinary students and the granting of its veterinary certificate. By a supplementary charter obtained by the Royal College of Veterinary Surgeons power is given to the members of the profession to elect their representatives at the Council by voting papers, instead of by personal attendance in London ; and the Highland and Agricultural Society, seeing that in consequence of this arrangement the Council is composed of representative men and not merely of the nominees of a school, and particularly that power is now given to the Council to hold the annual meeting periodically in Edinburgh, have agreed no longer to oppose that unity of the profession which has been so long hoped for by its sincerest well-wishers. The arrangement agreed upon is both conciliatory and liberal. On the one hand, the Highland and Agricultural Society agrees to discontinue the examinations ; on the other, the Royal College agrees to admit all those who have hitherto held the Society's certificate as members of the body-corporate without examination, but simply on the payment of a registration fee. This end being accomplished, it will remain for the profession, so auspiciously united, to obtain powers to protect its interests by preventing unqualified persons from assuming the title of veterinary surgeon. We shall not ask, nor would such a request be granted, that none be allowed to practise except the legally qualified ; what we want is, that all should appear before the public under their proper designation—the farrier as the farrier, the veterinary surgeon as the veterinary surgeon."

Referring next to the Contagious Diseases (Animals) Act of 1878, Professor

compensation to their owners at the rate of one-half of the actual value of the animal. Prior to this, compensation had never been granted in Great Britain, although it had been granted on the Continent. In August 1873 he received instructions to carry out the provisions of the Order, and with little variation he continued to do so until the present hour. The result had been that in 1873-4, 203 cows were slaughtered and £1,011 paid in compensation; in 1874-5, 70 cows were slaughtered and £502 16*s.* 9*d.* paid in compensation; in 1875-6, 73 cows were slaughtered and £676 12*s.* 6*d.* paid as compensation; in 1876-7, 111 cows were slaughtered and £712 15*s.* paid as compensation; and in 1877-8, 34 cows were slaughtered and £194 15*s.* paid as compensation. It would thus be seen that for the twelve years previous to the passing of the Act the losses from Pleuro-pneumonia had been £4,556 annually; for the past five years the average was £619, and for the present year £194. In these circumstances he was warranted in drawing the conclusion that the mortality and actual money loss from Pleuro-pneumonia, with or without compensation being awarded, were, under the system of inspection instituted and maintained by the local authority of this city, reduced to one-seventh of what they had been prior to the passing of the Act in 1869, and when the "do nothing" or "let alone" system held sway. Now the new Act allowed compensation to the amount of three-fourths of the value of the animal, and prohibited all movement of diseased animals, or animals that had been herded with diseased animals, within the jurisdiction of the local authority except with their permission; and further closed for fifty-six days premises where disease had existed. He was of opinion that if all local authorities did their duty, the ravages of Pleuro-pneumonia, like those of Cattle Plague, would become a tale that had been told. Principal M'Call afterwards referred to the position of the Highland and Agricultural Society with regard to the profession. For many years that Society had held examinations and granted certificates; but in no clause of its charter had it power to grant these certificates or diplomas in veterinary science. It had acted illegally in doing so; and the document issued by it, however competent the examiners, was an illegal document, and conferred no power of admission to the veterinary profession. There was only one chartered body legally empowered to grant diplomas to veterinary students, and that was the Royal College of Veterinary Surgeons,—all its members, whether educated in London, Glasgow, or Edinburgh, being placed on the same platform by virtue of having the same degree. He referred to the attempts that had been made by the Highland Society to obtain power to grant diplomas, and spoke against the idea of having a Scottish body with such privileges. He was in favour of there being no monopoly in teaching, but he wished to continue the monopoly of granting degrees; for rivalry there meant discord, weakness, and jealousy—the splitting-up of the profession into a number of weak bodies rivalling each other in granting the greatest number of diplomas at the cheapest price. He was, however, glad to tell them that an agreement was being adjusted between the Royal College and the Highland Society, whereby, on certain conditions, all persons holding the Society's certificate would be allowed within the ranks of the profession,—but on the distinct understanding that the Society shall for the future cease to examine or grant any certificates to veterinary students; and that that agreement might be finally consummated ought to be the prayer of every friend of the profession, and of the whole body-corporate. Principal M'Call concluded by giving a few words of advice to the students entering for the first session.

On the motion of the CHAIRMAN, a hearty vote of thanks was awarded to Principal M'Call for his valuable address; and a similar compliment having been paid to the Chairman, the proceedings terminated.

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Williams spoke of it as "an Act of Parliament which has caused great diversity of opinion, even amongst those of the same political belief—some maintaining that it is calculated to raise the price of the flesh meat of the country; that it is an Act protective of the interests of landowners and agriculturists only, and antagonistic to those of the commercial and other classes. We will not enter into what might be considered its political bearing, but simply state what is the general belief of the veterinary profession—namely, that had the Act been passed in its first form, it would have undoubtedly prevented the further importation of foreign diseases to our shores; and even clipped and shorn as it now is, we believe it to be an improvement upon the Act of 1869, which allowed the importation of animals, subject to the inspection at the ports of debarkation. This is the opinion of men who have had to deal with contagious diseases, and who cannot be said to be gainers by the Act; for if contagious diseases be suppressed, the emoluments appertaining to the office of inspector will no longer be received by veterinary surgeons. Therefore it must be admitted that we at least act from no selfish motives; on the contrary, for the general good, and at the sacrifice of our pecuniary interests. There are some sections and clauses in the Act, particularly relating to its bearing upon home stock, which we might perhaps profitably allude to. The 30th section gives power to the Privy Council to reserve for observation and treatment an animal liable to be slaughtered under the Act, subject to payment of compensation by the Privy Council, as in case of actual slaughter. Bearing, as it does, upon experimental pathology and original research into the nature of disease, the reservation from slaughter of specially selected diseased animals is calculated to lead to interesting results, and the clause must commend itself to our warm approval. Section 34 deals with the registration of cow-keepers, the inspection of cattle in dairies, ventilation, cleansing, drainage, the cleanliness of milk stores, shops, milk cans, and for prescribing precautions to be taken for protecting milk against infection and contamination. On reading these various precautionary measures, we cannot but feel thankful that they have been included in the Act, as their due enforcement will go a long way to prevent the propagation amongst the population of such diseases as Typhoid Fever, Scarlatina, etc. Not that we consider such diseases to exist amongst cattle; but that in many cases cattle sheds and the dwellings contagious thereto, badly drained and surrounded by filth, are calculated to provide the proper material for the origin and growth of the contagia of human diseases, and that such infecting materials are conveyed over wide districts by the milk, taken from place to place and house to house. I need not refer to those outbreaks of disease originating in dairy buildings, and conveyed over whole districts, carrying disease and death to many, very many homes. Under the Act of 1869 the period of quarantine was thirty days; under the new Act it is extended to fifty-six days. In the majority of instances this latter period will be sufficiently long; some cases, however, will occur which will prove that it is too short, and that, instead of eight, the period ought to have been extended to twelve weeks at least. There are many other sections in the Act which are highly commendable; but, as stated in the *Solicitors' Journal*, it affords perhaps the most remarkable instance yet produced of the modern system of delegated legislation. On fifty-nine subjects the Privy Council is enabled to make Orders which are to have effect as if they had been enacted in the Act. These Orders, with certain small exceptions, are to be published in the *London Gazette;* but it seems to have been doubted whether the circulation which is enjoyed by that journal among the agricultural classes would suffice to render the contents of the Orders generally known; and it is accordingly provided that every Order shall be published by every local authority to

whom it is sent by the Privy Council for publication, in such a manner as the Privy Council may direct, but the validity of the Order is not to be affected by want of, or defect or irregularity in, any publication thereof. The publication is to be at the expense of the local authority ; and it is hardly to be supposed that the Privy Council will desire to burden the local rates of every agricultural district in the country with the cost of advertisement in the local papers or elsewhere of lengthy orders on the fifty-nine subjects. But how otherwise is a farmer to know the law? He may buy the Act, acquaint himself with its provisions, and consider himself fully prepared to observe the law in case the diseases specially mentioned in the Act—viz., Cattle Plague, Pleuro-pneumonia, or Foot-and-mouth Disease—visit his farm. But he will probably be surprised to hear that by an Order made on the 16th August last the Privy Council provided that 'horses, asses and mules shall be deemed to be animals, and Glanders and Farcy to be diseases,' for the purpose of certain sections of the Act; and that by the same Order provisions were made for Sheep-pox and Sheep-scab. The farmer, in fact, unless he subscribes to the *London Gazette*, can never be certain that he knows his duty; and if he resolves to take, read, and inwardly digest his *Gazette*, he will cut open the lively columns with a feeling akin to that of the speculator who glances at the share-list of the *Times*. He may console himself to-day with the thought that, at all events, he knows what diseases are within the Act; but to-morrow he may find he has to begin his study afresh. I think it a great pity the Act does not make some provision for the encouragement of an extended trial of the efficacy or otherwise of inoculation for the prevention of Pleuro-pneumonia. In this neighbourhood, within the last few months, inoculation has been performed by Mr. Rutherford to a great extent, and, so far as I can personally speak of the operation, it has undoubtedly been the means of preventing the propagation of the disease. But to combat such a disease as Pleuro-pneumonia, now so firmly established amongst our cattle, more is required than the personal endeavours of a single individual. We, however, extend to that gentleman that praise which is justly his due for his boldness in introducing the experiment."

The proceedings were brought to a close with votes of thanks to Principal Williams, and the Chairman, Dr. Dycer.

OPENING OF THE MONTREAL VETERINARY COLLEGE.

THE opening lecture of this College was delivered on October 1st, by Professor Wm. OSLER, M.D., M.R.C.P.L., before a large and appreciative audience of students, medical men, and veterinary surgeons. The subject chosen was "Comparative Pathology," and being one to which the lecturer had given special attention, more particularly during the past summer—he having been engaged, with Dr. Burdon Sanderson and Dr. Klein, at the Brown Institute in London, specially on this and kindred subjects—a more than ordinary exposition of the present position of this study was expected, and the audience were not disappointed. The Doctor, after defining the subject, Pathology, as being the physiology and microscopic anatomy of disease, went on to explain the theories and results of recent investigations of *contagium vivum;* the discovery of *Bacteria* in the blood of diseases of the Anthrax variety ; the recent discovery of these organisms in the blood in the so-called Hog Cholera, or, as it was more properly named, "*Contagious Pneumo-enteritis*" by Dr. Klein. The Doctor next referred to the unjust "Contagious Diseases (Animals) Act of 1878," recently passed in England, to come into force on the 1st of January next, by which our cattle trade was to be seriously interfered with, if not ruined. All American cattle,

including Canadian, were to be slaughtered at the port of entry. In Canada we have no contagious diseases, and it is manifestly unfair to include our cattle. In the Western States, it is true, they have the *Splenic Fever* (Texas Fever) and *Pneumo-enteritis* in pigs. Our Government should lose no time in placing the matter in proper veterinary hands; all out-going stock should be inspected by qualified inspectors. He referred to the advantages already derived from the quarantine at Point Levis. An animal affected with Hog Cholera arrived, and was detained by Mr. McEachran, the inspector, and thus prevented from spreading a virulent and contagious disease among our stock. The Government should do everything to render the quarantine more efficient. The lecturer concluded his lecture by explaining to the students the nature of their studies; urging them to entertain a high appreciation of scientific study, to be regular in their attendance, to adopt a systematic disposition of their time, and to take advantage of the opportunities afforded them while students here.

Prof. MCEACHRAN followed with a few words of welcome to the students. He was happy to find that year by year the number increased. This session showed an increase of ten over the previous one. Over thirty had already enrolled—thirteen from the United States. Illinois, Wisconsin, Massachusetts, New York, Pennsylvania and Vermont had sent their representatives. Toronto and Ottawa were represented also; and he was particularly glad to find no less than thirteen French Canadian students among the number.

MONTREAL VETERINARY MEDICAL ASSOCIATION.

THE second fortnightly meeting of this Association was held at the Veterinary College on Thursday, November 7th, Professor Osler in the chair. The following new members, who had been previously proposed, were balloted for and elected:—N. P. Hinkley, Buffalo, N.Y., U.S.; ——Laveau, Buffalo, N.Y., U.S.; T. L. Martin, Dorset, Vermont, U.S.; B. D. Pierce, Springfield, Mass., U.S.; J. B. Green, Yellow Springs, Ohio, U.S.; Charles Ormond, Milwaukee, Wisconsin, U.S.; R. Price, Montreal; F. S. Thomas, M.D., Houson, Mass., U.S.; ——Williams, Argenta, Illinois, U.S.; H. C. Heward, Toronto, Ont.; James Bell, M.D., Montreal, P.Q.

It was resolved that the privileges of the Association and Library be extended to the members of the French Association.

Moved by Mr. C. J. ALLOWAY, seconded by Mr. BRUNEAU: "That the members of the M. V. M. Association present to the widow and family of the late Mr. T. H. Murcott, V.S., our heartfelt condolence on the sad bereavement which has deprived them of a kind husband and dear relative; and that also to the Canadian Central Veterinary Association be conveyed our sincere sympathy that the same deplorable catastrophe has taken from them so promising a member and active an officer as our lamented friend and brother, and in so doing to give expression to the universal assurance that the gap thus left will not be easily filled, or the loss to the profession readily repaired."

Mr. C. C. LYFORD, B.S., V.S., read the first paper, on "Muscular Rheumatism treated successfully by large doses of Salicylic Acid," which elicited a lively discussion.

The President, Professor MCEACHRAN, was called upon to read his paper on "The Aids and Restraints made use of in the Practice of Veterinary Surgery," which was as follows:—

"GENTLEMEN,—Composed, as this Association is, mostly of students, I venture to leave the field of scientific researches, and turn your attention to some matters of great importance to you, professionally, which are not

embraced in your regular course of lectures. I refer to those aids and methods of restraining our poor dumb patients, both for the administration of medicines and performance of operations. It must be remembered that the great aim and object of our science is to relieve disease and suffering in the lower animals; hence the members of our profession should be constant and active in the preventing of cruelty to animals. We become the more impressed with this fact when we consider man's moral responsibility with regard to his treatment of the dumb creatures committed to his care. Creatures though dumb and incapable of conveying ideas in vocal expressions, yet, by a language unmistakable, give expression to their feelings of pleasure or pain, of gratification or disappointment, of joy and of grief. Your knowledge of the anatomy and physiology of the animal body must teach you that in all animals—even from the lowest grade upwards—wherever we find a nervous system we have sensation or feeling; and the more we ascend in the scale, the more delicate and acute does the sensibility become. Your dissections must also impress you with the fact that, apart from the communicating intelligence of the typical animal man, and his possessing an immortal being or principle called the soul, there is but little organic difference; all are essentially constructed alike, and the active principle called life is originated, preserved and ended by the same laws. Hence we are justified in concluding that the lower animals feel pain as acutely as we do ourselves; and, keeping this idea always before us, we shall learn to do unto others as we would be done unto. All are not constructed alike, even in the same species or the same family; we shall find a marked difference in the pain-enduring qualities. In the practice of your profession you will often be called upon to inflict temporary pain for curative purposes. Various restraints have to be resorted to to enable you to administer medicine or perform operations—restraints which are unnecessarily cruel and employed with the most unfeeling thoughtlessness,—in many cases causing more pain and suffering than the disease itself, and the operation to be performed. It is to such aids and restraints I wish to direct your attention—especially to what is right—in the hope that by a careful consideration of the subject you will all be induced to discourage cruelty to animals whenever it presents itself to you, and in your own practice you may reduce suffering to a minimum. One of the most important essentials in a member of our profession is a patient, yet firm and determined will. Were all our patients educated by kindness and proper treatment to that degree of docility which they are capable of, we should find them much easier than we do to manage when coming under our professional care. Many animals, from being teased by grooms, become dangerous for strangers to approach; others are naturally shy, and, if a stranger suddenly approaches them, in their terror are apt to resort to their natural defence—their heels or mouth; while some are naturally vicious, and will resent the least interference of a stranger. For this reason you will have to practise the art of handling horses with confidence, and approach, cautious and yet determined, so as to avoid alarming them. You should always speak to a strange horse in approaching him for professional purposes, fondle and encourage him, and having gained his confidence, proceed to your examination. Many, in fact most, horses require to be placed under severe restraints to enable us to administer medicine or perform operations; but it is most astonishing how much they will stand in this way if properly managed." He then described the various aids and restraints used in administering medicine: first, for giving boluses, the varieties of balling irons and popguns were exhibited and explained; for drenches, the various contrivances of bottles and pulleys, etc. Speaking of the twitch, he remarked that it was a very old restraint; that it is very

severe, and far too frequently resorted to when we consider that the muzzle of the horse is the seat of touch, and consequently is very freely supplied with nerves. So very sensitive is this part, that many horses will scream when twitched in this way. The running noose, gag side-line, Rarey method, hobbles and the trivis, were described in detail. The lecturer next referred to medical aids—chloroform and ether. On this subject he remarked upon the great discovery of general anæsthesia by Sir Humphrey Davy; the later development of the subject by an American, Mr. Horace Wells; and, finally, the general and successful appliances of it by the late Sir James Y. Simpson, of Edinburgh, to whom is due the credit of conferring one of the greatest blessings which it has been the privilege of science to confer on suffering humanity, in this or any other age. He regretted that so few owners of animals were willing to run the risk of accidents from the use of chloroform on the lower animals; and thus the use of anæsthetics on them had made comparatively little progress. He next explained in detail and illustrated the use of local anæsthesia, by rendering the hand of one of the students locally insensible to pain by ether spray from Richardson's spray apparatus, and read from Dr. Richardson's pamphlet a description of the operation on animals to which it was especially adapted. The discussion which followed brought out many interesting points in connection with the subject.

Dr. OSLER described a very ingenious method of placing medium-sized animals on a table, in use at the Brown Institute in London.

VETERINARY MEDICAL ASSOCIATION OF THE ROYAL VETERINARY COLLEGE.

THE first general meeting of the members of the Veterinary Medical Association was held in the theatre of the Royal Veterinary College on Tuesday evening, 15th October, 1878, being the opening meeting of the forty-third session.

The President, Professor Pritchard, occupied the chair. Ten members of the Royal College of Veterinary Surgeons, and fifty-five students, members, and visitors attended.

The minutes of the last meeting were read and received.

The names of seven gentlemen to be elected as members were next submitted.

The SECRETARY then read his "Review of the Proceedings of the Association during the session 1877-8," as approved by the Council. It was as follows:—

"There was a time-honoured custom in this Association—a custom adopted in almost all learned societies, and generally considered beneficial—that a summary of work done during the past session, and of the prospects of the Association, and a concise statement of the changes in its constitution which its particular phase of evolution may have necessitated, should be presented to old and new members together at the opening meeting of a fresh year of work. In accordance with this custom, and in the hope that by so doing I may bring to the minds of our members thoughts of the past glories of the Association, I venture to trespass upon your time and patience on this occasion.

"We are now entering upon our forty-third session; and it may not be out of place to call attention to the fact that long before many of us were born, the Association whose professional position now falls on us as a trust we are bound in honour to uphold was doing valuable work in rousing professional spirit, stimulating research and *esprit de corps*. It has been handed down

to us by our fathers. In the days gone by they hotly contested professional points in its debates; in the days gone by they here brought their minds to bear on all subjects touching the advancement of the veterinary profession and the progress of veterinary science. It was here they met in friendly rivalry to discuss professional topics, and it was here they laid the foundations of the high scientific positions many of them occupy in the present day. I have but to open the list of fellows, members, and associates, to find at once so many well-known names that it would be invidious to specify any of those who now lead our profession, who once led the debates in our Association; but without fear of hurting the feelings of any, I may point out to you the names of Coleman, Spooner, Sewell, Morton, Youatt, Dick, Blaine, and William Percivall, who have finished their work and are now at rest. I may point out to you, too, the names of many leaders in the advancement of medical science who were associates of the Veterinary Medical Association, and appreciated its value, and studied to promote its welfare. Professor Brande, Benjamin Brodie, Astley Cooper, Bransby Cooper, Bright, Erasmus Wilson, form but a few on the list of those who have laboured in our own country; among foreign associates are included Reynault, Gurlt, Lassaigne, Hertwig, Goubaux, and many others. Shall we not, then, deem it a privilege to advance a work supported by such men? Shall we not 'strain every nerve' that we may prove no mean successors to those who have paved our way, may jealously uphold the status of our Association?

"And in advancing its interests we are promoting our own. We are all seekers after knowledge, especially such as bears upon veterinary science. Whenever we submit an essay, exhibit a specimen, or advance an idea openly at the meetings, we give information to others, and we receive from them three- or four-fold. The freedom of debate, which is one of the rules of our Society, enables us to propound original ideas, and thus to render them public, whereby their wheat may be sifted from their chaff. That freedom, too, should train us to be independent in the statement of our professional opinions, and in the support of professional interests. Who that has exposed himself to the searching scrutiny of our members in debate, when launched into professional career need fear intelligent cross-questioning by a well-read client or the adroit sarcasm of a man learned in the law? The mere opportunity of practice in the public elucidation of ideas is of value to a young man, as giving him the *ars loquendi* and the necessary self-confidence; the heat of the debates renders him ready in logical expedients, quick to seize the leading points in an argument, and prompt in reply.

"But in addition to this, the matter of our meetings brings under a novel form fresh information, and suggests entirely new trains of thought. The student hard at work preparing for examination may here learn more than by toiling at his books, or often by attendance upon lectures; he will have it deeply impressed upon his mind, ready for use in any emergency of examination or of practice. The liberty of choice of essay subjects thus proves of value. The junior student, by attending, will gain information sure to be useful to him at the future stages of his study; he may *apply* his present information, and will often very materially add to it matter of immediate value to him. Thus, during the past session, one of our vice-presidents—Mr. N. Almond—brought forward the subject of the 'Nomenclature and Classification of Remedial Agents' in an able manner; and there is ample scope not only for novelty, but for the imparting of valuable information to the profession at large, in the treatment of the applications of botany and chemistry to veterinary science, or in the record of observations on the influence of physical agents upon the animal system.

"Do not, then, gentlemen who are now among us for the first time, imagine you have no business here! Work with us, correct our errors and we will

rectify yours; we give you hearty welcome! To those who have advanced one step in their studies we offer papers on anatomy and on physiology; we show them specimens illustrating normal and abnormal structure; we work with them at anatomy and physiology, and we show them how those sciences prove the bases of surgery and medicine. During the past session we have had no paper solely on anatomy, nor any solely devoted to physiology; but we shall the more appreciate co-operation in these matters, and any future assistance on them will be thoroughly estimated. Many anatomical statements made during the course of a debate require to be corrected, and operative veterinary surgery and veterinary medicine yet demand much from the labours of anatomists and physiologists. Here, then, is a noble scope, a wide field in which the second year's student may do good work—work which will be of value to our common science.

"Our session which has passed must have been of particular interest to students of all grades, but especially to those under whose *immediate* notice surgery and medicine come. The following list of essays read will show the range of our debates and the amount of information they must have imparted:—

13th November—Mr. Gibbings, 'Lameness in Horses.'
27th „ —Mr. W. South, 'Sandcrack.'
11th December—Mr. Dudgeon, 'Scarlatina in the Horse,' and Mr. J. Moore, M.R.C.V.S., on 'Sandcrack.'
15th January —Mr. Wartnaby, 'Parasitic Bronchial Disease of Calves.'
29th „ —Mr. Almond, 'Nomenclature and Classification of Remedial Agents.'
5th February —Mr. E. Moore, M.R.C.V.S., 'Influenza Epizoötica in America in 1872.'
19th „ —Mr. Fowler, 'Glanders and Farcy.'
12th March —Mr. Ains, M.R.C.V.S., 'Scab in Sheep.'
19th „ —Mr. Storrar, M.R.C.V.S., 'Parturient Apoplexy.'

"Of these essays and their resulting debates several occupied two consecutive nights of meeting, and in many cases the discussion was highly animated. Three members of the Royal College of Veterinary Surgeons, it will be seen, read papers; and another had forwarded a paper on 'Rabies,' which remains in the hands of the Secretary. Its author—D. H. Tombs, M.R.C.V.S.—died since the end of last session: we record with regret the loss of an active co-operator, and a prizeman of the Association. Many qualified practitioners have attended our meetings, and have been interested and joined in our debates—showing that they have not forgotten that they are members of the Association. We shall appreciate even more active aid from them, and the Council has taken means to promote it.

"In the above list of subjects it will be seen that under the headings 'Lameness in Horses' and 'Sandcrack,' *Surgery* has received due attention; and we may especially recall the animated debate and energetic argument which attended our almost exhaustive treatment of the latter subject. Mr. W. South's method of procedure has been adopted by many practitioners and found useful, and we are indebted to Mr. Moore, jun., for his description of the means he has found useful in the treatment of this affection. *Parasitology*, in its ectozoal and entozoal aspects, was treated by Messrs. Avis and Wartnaby respectively, and their papers serve to show that we extend our inquiries to all domesticated animals in health and in disease. A novel *Blood Disease* was submitted by Mr. Dudgeon's paper on 'Scarlatina,' and from it we deduced interesting questions of comparative pathology. The question of *Prevention of Contagious Diseases* and of *Sanitary Measures* was

brought up in the long debate on Mr. Fowler's paper; and the same questions, as well as some considerations of the *Geographical Range of Disease*, were suggested by Mr. Moore's essay. The debate on the *Physiology of the Nervous System*, in relation to parturition and its results, and the theoretical views advanced on the *Pathology* of 'Milk Fever,' render Mr. Storrar's paper memorable.

"But there is another feature of our meetings which requires comment. To many practitioners and others we owe valuable specimens, morbid and normal. To specify all that have been submitted to us during our session would be too long a task, but I may call attention to a few:—Case of long-standing 'Nasal Gleet'; of Paralysis resulting from Rupture of Bloodvessels, etc.; of Puncture of the Heart by a foreign body; of Calcification of the Heart; of Irregular Dentition accompanied by Malformation of the Maxillary Condyle; of Huge Renal Calculus; of Ulcerative Disease of the Elbow Joint, and so on. But I have named enough to show the range of our subjects, and that our meetings are practically useful in familiarising the eye and the mind with the changes in the animal system produced by disease. While thus having shown the value of the actual work of the Association, we must not forget to remind ourselves of the fact that we learn a vast amount in writing an essay: we examine works on the subject; we sift the views of the authors and detect their fallacies; we make and record practical observations; we think out their application, and we reduce all to due order. We then, with a firm basis of fact, submit our deductions to minds differently constituted from ours, whereby they are either confirmed or shown to be erroneous. We have here all the elements of scientific research; we thus train ourselves for more enlarged labours, and for the larger and more learned audience of the men of science in all lands and in all ages, present and to come.

"Nor are incentives to such exertions wanting in the programme of the Society. A reference to the list of prizes will show you that while every attempt to forward the objects of the Association by means of an essay is acknowledged by a certificate superior to that of membership, those essays which are entitled especially to recognition receive on a handsome ground-work 'The Special Thanks of the Association'; while to the best essay of all read at the general meetings by a student member during each session is adjudged the 'Association General Meetings Prize,' which generally assumes a form useful to a practitioner—as surgical instruments or books of reference. Again, the spirit of emulation should be prompted by the offer of the 'Association Prize Medals,' the value of which is greatly enhanced by the many years during which they have been awarded. The subject for an essay is announced at the first meeting of each session; the essays must be written as the Rules and Regulations dictate. The last subject was 'Eczema Epizoötica.' The Council of the Association, through me, wishes to express regret at the apathy displayed in this matter: no essay was forwarded in competition! The second medal is awarded to the preparer of the best specimen illustrating some stated part of the animal body. For last session the subject was the superficial nerves and muscles of the face of the horse, and Mr. W. South was awarded the medal. The Council looks forward to a larger competition this year.

"Not only in the production of papers at the general meetings, and the elaboration of essays and specimens, does the Association encourage the friendly rivalry of its members, but also every year there is a competition for the *Spooner Gold Medal*—valuable not only intrinsically, but also as being a tribute of respect to the memory of the late Principal of the Royal Veterinary College, and patron of our Association, whose talents will long be remembered and whose loss will long be felt. The subjects of the examination are 'all such as relate to veterinary science,' and the examinations may be written,

practical, or *vivâ voce*, as the examiners decide. Last year six candidates presented themselves; they were examined on paper in anatomy and chemistry, and *viva-voce* questions were submitted to them on veterinary surgery and medicine. The result, as reported to the Council, is—Mr. George Wartnaby, gold medalist; Mr. William Ashton Hancock, to be awarded certificate of merit.

"'The Board of Examiners reports to the Council deficiency in anatomy and chemistry.'

"The administration of the Association as carried out by the Council has been displaying a necessary energy. From its members have been elected the several Boards of Examiners required for adjudication of the above prizes and awards. In addition, its meetings have been numerous and well attended, and mainly directed to the reorganisation of the library, including the addition and replacement of many works. We have thus at your disposal, for reference and as aids in research, a large number of valuable books, which a reference to the catalogue will show amounts to nearly 1400 volumes. While of these many serve to assist you in acquiring the most modern scientific views, others are records of the past, among which will be found several volumes of the 'Transactions of our Association.'

"Mindful also of the value of current periodical literature, the Council has resolved that the following be obtained regularly and be available for use of of all members:—*Veterinarian, Veterinary Journal, American Veterinary Review, Medical Examiner, Medical Times and Gazette, Lancet, Journal of Physiology*. The system of use and procuration of these you will find on the notice-board, as also the library rules. 'The Council hopes that acknowledgment of its efforts in the revival of general use of the library will be manifested by attention to the library rules and regulations.'

"By resolution of the Council of the 14th November, 1877, Mr. J. H. Steel was elected to the then vacant post of secretary; of 20th February, 1878, it was judged that 'for the encouragement of the members a list of honours and awards be forwarded for publication in the professional journals annually;' of 19th December, 1877, the rule imposing fines on student members for non-attendance at meetings was rescinded, 'the Council believing it preferable that the meetings depend for their success on their intrinsic value and their appreciation by the students.' These are some of the most important results, as bearing on the general conduct of the Association, of the expenditure of valuable time and labour by the gentlemen, members of the veterinary profession, who constitute the Council, under the presidency of Professor Pritchard. We may remark that the number of meetings and the time they occupied far exceeded that prescribed in the Rules and Regulations of the Association.

"Of new members during the session 1877-8 we enrolled twenty-three. Of members nine became Fellows. Of these Fellows five were considered deserving of the Honorary Fellowship, of whom Mr. Geo. Wartnaby was awarded the 'Association General Meetings Prize' for his essay on 'Parasitic Bronchial Disease of Calves.' Nineteen members of the Association became members of the Royal College of Veterinary Surgeons during the last year.

"The attendance of members and of visitors at the general meetings of the Association has been good. The following gentlemen filled the post of student vice-presidents:—1. Mr. William A. South; 2. Mr. Geo. Wartnaby; 3. Mr. Dudgeon; 4. Mr. Nicholas Almond; 5. ; 6. Mr. Markham. This post being annual, we shall call upon you to elect successors to these gentlemen, or to re-elect, if you think proper, any who remain. We shall also be happy to receive the names of gentlemen who will favour us with essays during the coming session.

"In all, nineteen meetings of the Association were held during the session 1877-8.

"With memories of the past to rouse our zeal, with hope for the future, and with certainty of practical and sound immediate benefit, we invite co-operation of members of all grades, and we invite strangers to enlist in our ranks. Let us not be behindhand in the race of science; let us think of those who have gone by and of those who are to come, and by good sterling work leave the session 1878-9 marked with golden letters in the annals of the Association. John Hy. Steel."

The report was received by the meeting.

The President then distributed the prizes and awards which are mentioned in the report.

The PRESIDENT next delivered his introductory remarks for the session 1878-9, urging especially upon the students the value of the Society as giving them an opportunity of practising the art of speaking in public.

The following gentlemen were then elected student vice-presidents for the session:—Messrs. D. Gregory, Almond, Mayor, Huband, Lepper, and Rugg.

After the names of those gentlemen who were prepared to read essays at the general meetings had been received, it was announced that at the next meeting, on 22nd October, Mr. Dixson, M.R.C.V.S., would read his essay on "Distemper as affecting the Dog."

The meeting then terminated. JOHN HY. STEEL, *Secretary.*

CENTRAL VETERINARY MEDICAL SOCIETY.

AT a meeting held on June 6th, 1878, the President, Professor Axe, in the chair,

The SECRETARY said he proposed to direct their attention to the subject of the use or abuse of the chisel invented by Mr. Thompson. Having a suitable case, he thought he would give it a trial. The result he would submit to them, as it was often easy to learn something from the success or the failure of an experiment. The subject was an old carriage-horse, doing fair work, and enjoying pretty good health; though being a "quidder," at periods of three or four months he had to rasp the animal's teeth, but for some time past had thought it only a waste of time, knowing that the last molar on one side was very much higher than the others. Having the instrument at hand, found it in use extremely heavy, but not a great deal of trouble, the horse standing very quiet.

He succeeded in getting it round the tooth, and fixed it, screwing it up to the extreme hilt, but the tooth would not move; he then worked the instrument both ways—with the effect of lacerating the mouth; the plate at the end of the machine getting loosened. All that came off was a tiny slip of tooth which he produced. He left the animal for a week for its mouth to get right, when he obtained Mr. Gowing's sliding chisel, and struck off the tooth portion now shown without difficulty.

His experience was that no instrument, with the greatest skill, suffices in some cases. He might add another case as an adjunct—one which was mentioned at one of the earlier meetings of the Society. The horse whose jaw he showed was starved to death, and the reason was not noticed till the body was opened; and then they found that some of the teeth had grown in an abnormal position, and the food had worked down into the alveolar socket of the lower jaw, which had led to necrosis of the bone, and the animal had died of chronic toothache. There was a swelling on each side of the jaw. He had obtained from the knackers the previous night a jaw showing bad teeth. The only history he knew was that the horse was an old one and starved to death; no explanation would be needed, so he would merely

exhibit the jaw. He thought Mr. Joseph Woodger successfully removed a growth of tooth with the shears when they were first introduced. He did not seem to object to the weight. If a horse stood quiet, the operation would be brief; but it took him at least an hour, and then he had to give it up. The dent in the piece of tooth would sufficiently indicate how far the tooth projected. He thought they might have two pairs of the shears, one with less concavity than now.

The Secretary next referred to the case of a horse which had sustained an injury to a joint three days or more, and, when he first saw it, was in great pain—almost unable to walk. It went from bad to worse, till the whole joint was involved. The case was a little remarkable, because the animal was insured for a certain sum, and the insurance company (very unwisely, as he thought) wished its life to be prolonged for the term of insurance. It appeared by the laws of the company, that in order to claim the insurance, the horse must either be killed or break its leg. They finally had the horse killed, and the owner received £25 and the horse. A large piece had sloughed out of the interior from the articulating surface, and exfoliation had taken place round the outer surface; the other bones had also become involved.

Professor AXE said that the two specimens which had been placed before them by Mr. Rowe presented one or two features of considerable interest. That of the teeth illustrated a very important practical fact in connection with the use of Mr. Thompson's shears. It showed them that, however efficient that instrument might be in its ordinary application, there were, nevertheless, exceptional conditions of teeth to which in its present state it was not applicable; and the case adverted to seemed to be one in point. In that case the tooth appeared to be too narrow for the instrument to grasp, and consequently Mr. Rowe had failed in his efforts to remove it. He had suggested that they should have two instruments in the place of one; but he thought on the score of economy he might suggest that they should have an instrument a little narrower in the cutting shears. Some enlargement of that kind, he thought, would meet other cases, and obviate the necessity of having two pairs. In passing to the question of teeth, he observed that dentistry in the lower animals was very interesting. Everything in regard to the teeth which concerned them was in a great measure practical. They had in the practice of their profession, in dealing with teeth, either to overcome certain defects of growth, or they had to overcome certain irregularities in regard to the displacement of teeth; or, as in the case mentioned, to correct excesses of wear. In the instance which had been brought before them, he apprehended that the projecting portion of tooth had arisen from the fact that the attrition had been imperfect, that the crown of the tooth did not come into contact with the crown of the corresponding one, and consequently, attrition not occurring, the tooth had grown, as it were, beyond its ordinary limits. With reference to the other specimen to which Mr. Rowe had directed their attention, it appeared that in that instance they had to deal with a swelling projecting from both sides of the jawbone; and Mr. Rowe had referred to a particular tooth which stood out, and which seemed in its present position to have occasioned an enlargement in the jaw; but he should certainly consider that the tooth corresponding to the seat of enlargement was not the diseased one, and that the enlargement was more apparent than real. He thought it was not the tooth corresponding to the enlargement that was diseased, but the next one, the one which followed it from before to behind, namely, the fourth molar tooth: that tooth, he considered, had been the subject of atrophy, and that where this jawbone had fallen in it had given that part of the bone corresponding to the fourth tooth an appearance of being swollen. The mischief would seem to be of a very

simple nature, not due to any malignant disease of bone, but due to a simple atrophy of tooth.

In reply to the PRESIDENT,

Mr. ROWE said the circumstances were these:—The owner had at the time eight horses, which were all insured by payment of a sum of about £20. The horse referred to was insured for £40. It was in excellent health till the time of the injury; as far as his memory went, the insurance was in its ninth or tenth month. When he acquainted the secretary of the insurance office with the fact that the horse required to be destroyed as incurable and on humane grounds, he was met with the inquiry, Was the horse likely to die? He said, "No, it might live for some time." They asked how long. He had replied it might live five or six weeks in the slings, where it had been four or five weeks already. The official said that it might be likely to die, but they must not kill it, or they would do so at their own risk. He had replied that the horse was incapable of doing work, and it ought to be killed. The owner was excessively annoyed about the matter, and as an agent for the company he had to do the best he could between the parties. The company had written his client a letter, in which, although they declined the responsibility of payment of the whole of the claim, they said they were willing to make a compromise, and to give him £25 and the horse. His client had consulted a lawyer before accepting the offer, and he, finding that by the terms of the agreement the horse must either have broken its leg or been killed before the insurance could be claimed, advised the acceptance of the offer.

Professor AXE considered the terms of insurance to have been somewhat special.

Mr. ROWE said it would appear so. He regretted Mr. Wragg was not present, because he was acting in the East End, at Whitechapel, for an insurance company in the same way as he himself had acted in the West. He had asked him how he met a similar difficulty, and he replied, "Promptly enough. They had the horse destroyed, the company paid the claim, and there was an end of it." If he (Mr. Rowe) had the horse destroyed and then claimed on it, he thought it was possible they would not have objected; but having put the claim before them in the lifetime of the horse, and the policy being near its termination, they were tempted by the prospect of the horse living beyond the time to object to the payment. It might have been very unpleasant to him; and he mentioned the circumstance in order to suggest that veterinary surgeons in dealing with insurances should look well into the rules of the office, and be very cautious, or they might get into trouble with their clients, and incur serious damage to their professional practice.

Mr. SOUTH said he would like to ask Mr. Rowe if they could not have claimed for depreciation in the value of the horse.

Mr. ROWE said there was no such clause.

Mr. MOLE inquired whether, in their experience, they had found the hind-feet in the horse more liable to disease than the fore-feet. It had been his unfortunate lot to have experience in several cases of foot lameness; and he had found they had done badly, especially by dying, much to his disgust, in two cases at any rate, and he had found that when the front foot was diseased the animals had often done well, and many of them got fat.

Mr. ROWE said it was a question he had never heard or thought of before, and worth considering in connection with future instances. As far as he could remember, he thought the hind-feet cases were the worse of the two, for the horse appeared to act differently in the weight he imposed on the hind-feet, so that it seemed to give him more pain, and a horse affected in the hind-feet would, perhaps, lie down all the time, but if affected in the fore-feet it was otherwise.

Mr. SOUTH said he understood that they did worse when the hind than when the fore legs were affected. He had never taken particular notice, but he thought it might be so, from the fact that the hind-legs were further away from the centre of circulation.

Professor AXE said, so far as his experience had gone, he could not charge his memory with having made the observation as to there being any difference in the results arising out of injury to the fore-feet as compared to injury in the hind-feet. If only the fact could be established, they might then theorise upon it, and be induced to take advantage of the suggestion made by Mr. South—that the hind limbs being further from the centre of circulation, may be more seriously affected. But it would be advisable, first, to establish the fact. Was it a fact?

Mr. SOUTH said there were more diseases in the hind-legs, as a rule—sore heels, and that kind of thing; and that might be the reason why difficulty was oftener experienced in treating the hind-legs—from the fact that there were more diseases and a greater liability to disease in the hind-legs.

Mr. ROWE said he should like to know if any gentleman had tried the chisel. He hoped they would not think from what he had said that he considered it a useless instrument. He thought all credit was due to any member of the profession who endeavoured to introduce any means likely to assist them in their operations; and assistance was very largely required in dentistry. He knew that in the case of the dog many instruments were needed, and some very peculiar ones too, and he had had much difficulty in obtaining some of them. With the horse he had not had much to do in regard to the teeth; but he often found the rasp a very inefficient instrument for removing the cause of imperfect mastication. It might be in the memory of some of them that he stated there, some time since, that Professor Williams was in the habit of gouging with a chisel for the extraction of teeth, and the Professor had assured him that he had performed the operation with complete success. When he afterwards met him at the meeting in Manchester, the Professor referred again to the case, and said that the horse which had been operated upon was doing exceedingly well, and was not a "quidder."

Professor AXE said gouging was not an uncommon practice in the country.

JAMES ROWE, *Hon. Sec.*

LANCASHIRE VETERINARY MEDICAL ASSOCIATION.

THE usual quarterly meeting of the above Association was held at the Blackfriars Hotel, on Thursday, October 31st, 1878, Tedbar Hopkin, Esq., President, in the chair.

The following gentlemen were present:—Professor Pritchard, Royal Veterinary College, London; Messrs. Tom Taylor, W. A. Taylor, E. Faulkner, A. Lawson, B. Wood, and A. Prescott, of Manchester; Messrs. Hutcheon, Leather, and C. W. Elam, of Liverpool; James Moredale, of London; A. Challinor, Bolton; W. Woods, and W. Woods, jun., of Wigan; W. Whittle, of Worsley; J. B. Taylor, Ashton; Messrs. Hart and Bunnel, Oldham; W. Dacre, Altrincham; Storrar, jun., of Chester; J. Marshall, Knutsford, and the Secretary.

Letters of excuse were read from Messrs. Peter Taylor, M. E. Naylor, W. J. Cartwright, and G. Heyes, Esq.

After the minutes of the last meeting had been read and confirmed, Mr. J. B. TAYLOR proposed that the tooth shears, the property of the Society, be returned to the maker for repairs; seconded by Mr. HART, and carried.

After a few remarks from the Secretary respecting Mr. Peter Taylor's original motion with regard to a reporter to attend these meetings, Mr. A.

CHALLINOR proposed that the Secretary be deputed to engage one of the gentlemen who had answered the advertisement, and the charge not to exceed £1 1s. per meeting ; seconded by Mr. WOODS, and carried.

Mr. WM. DACRE then read an interesting paper on "The Adoption of Dr. Burggraeve's Dosemetric System of Medicine in Veterinary Practice."

"MR. PRESIDENT AND GENTLEMEN.—While in Paris this summer, I had introduced to my notice by an old friend, Mr. Landrin, V.S., of Paris, the Dosemetric System of Dr. Burggraeve. Mr. Landrin is the author of a manual on the adaptation of the system to veterinary medicine, and has given the method great attention for some years past. On the subject of therapeutics he has written several papers, and was one of the founders of the Therapeutical Society of Paris. I need scarcely say that he is an enthusiastic advocate of this comparatively new method, of which I will endeavour to give you some faint idea.

"Dosemetric therapeutics, created and for a long time experimented upon by Professor Burggraeve of the University of Ghent, has for its basis the employment of the active substances of medicines, such as the alkaloids, given in doses mathematically defined and under the guidance of certain rules. Dr. Burggraeve likens the living body to a delicate balance affected by the slightest difference of weight in either scale, and in order to restore the equilibrium it is necessary to give medicines divided into fractional parts, and it is often the last dose administered that produces the reaction which brings back health. In all sickness we should try to eliminate the morbid cause of disease by the employment of a principal medicine, at the same time relieving symptoms as they appear by the use of such substances as are indicated at the time. In acute affections the medicine should be given dose after dose until the desired effect is produced, and it is often the last dose which brings about the desired result. With regard to the action of the medicines there is nothing fixed ; everything depends upon the resistance of the disease to the remedy, the idiosyncrasy of the subject, or the acuteness of the attack. In chronic affections the medicines are given (always in small doses), but at greater intervals, as they have frequently to be prescribed over a length of time. Thus in acute affections let the treatment be acute, and in chronic affections let it be chronic. The action of medicines differs in acute and chronic cases : in the first they have a calming or sedative effect, and in the latter they act upon the secretory systems. We see, then, into what a small compass the posology of the dosemetric system is reduced. There is no fear of not having attained, or having exceeded, the necessary dose.

"Let us see now how this method is applied in disease. Take, for example, a case of Pneumonia. The patient is under the influence of an irritation of the vaso-motor system of nerves. The thermometer indicates a high animal temperature, which shows the gravity of the case ; the pulse is quick and strong ; in a word, he is suffering from fever. If we allow the disease to follow its course, the temperature will become raised to a point incompatible with life, and the subject will succumb in the first stage of the disease. If, on the contrary, we give dose upon dose of sedative alkaloids, such as aconitine, veratrine, digitaline, which have a direct action on the vaso-motor system—an action that can be seen on taking the pulse or temperature—we see the change : the fever diminishes considerably, and finally disappears. It however often happens that from the very beginning of the malady, instead of fever there is a vital prostration, and in such cases we should administer nervines. Strychnine (the sulphate or arsenate), quassine or jalapine may be given to counteract the effects of dyspepsia, and the want of appetite. The aim of the dosimetrician should be to determine the precise action of the medicine, not only on the whole animal economy, but on the different organic systems separately. Thus morphine is a brain sedative, while cicutrine pro-

duces a sedative effect on the spinal cord, and hyosciamine and atropine have a powerful action on the sphincters, relieving at once constipation or retention of the urine; bromine, quinine, or better still its salts, until the vital forces are sufficiently raised; when the reaction which follows can be regulated, if necessary, by the aconitine, veratrine, or digitaline. During the course of treatment all symptoms of agitation or pain can be mastered by administering morphine, codine, or narcine, according to the degree of suffering. If there is any spasm, hyosciamine or atropine must be used during convalescence. In combining one alkaloid with another we obtain the special action of both substances: for example, in administering at the same time strychnine and hyosciamine, we easily remove the tonic muscular contracting spasm of the œsophagus. If, instead of having to deal with traumatic or inflammatory fever, we have to treat disease of an intermittent character, and miasmatic in its nature, then we must have recourse to quinine, salicine, or the salicylic acid. All the active principles alluded to, and a long list of others, are made up in the form of sugar-coated granules. The alkaloids they contain are of guaranteed purity, and divided into regular doses. They each contain a milligramme, half a milligramme, or a centigramme of the active substance; they are very easily given with the horse: they may be placed in a small quantity of bran or chaff, a morsel of carrot, or made into a ball with linseed meal or any other similar substances. Apropos of the doses to be given, that depends upon the age and size of the animal. For the horse from four to six granules of the alkaloids; and for the other substances—the arsenates, for example—it is often necessary to augment the number. For the dog one granule is sufficient, with the exception of such medicines as quassine, phosphoric acid, or santonine. One of the objections to this system of medicine is its cost. To this Mr. Landrin replies that a medicine that cures, no matter what the price may be, is always cheaper than a remedy that allows the patient to die; and further, that the prompt resolution of the disease and a short stage of convalescence will more than cover the first outlay—the chemist—for the proverb that time is money may be very truthfully applied to our larger domestic animals.

"And now, gentlemen, I will in conclusion give you some extracts from five cases of that formidable disease Spontaneous Paraplegia, which were recorded by Mr. Landrin in the Therapeutical Society's journal, 1874; and the relation of those cases here will, I hope, give you a better idea of the doses, etc., than anything you have yet heard on this subject. Case No. 1: a light harness horse, attached to a vehicle, after having run about 200 yards, suddenly fell lame of the near hind-leg. The lameness increased rapidly. The animal had an anxious expression, was covered with sweat, and threatened to tumble down; and it was only with considerable trouble he was taken to the stable. He had great difficulty in standing—plunging forward every time he moved, the hind-leg flexing until the front of the fetlock came to the ground. The breathing was much distressed, the membrane of the eyes red and injected, and a quick, hurried pulse. With assistance 16 lbs. of blood was taken. Scarcely was this done when he fell heavily, having lost all use of his limbs. Rubefacients to the thighs and loins were applied; five granules of arsenate of strychnine and six granules of phosphoric acid were administered every quarter of an hour for two hours. The animal took some hay and sloppy mash. This inclination to eat is considered by Professor Bouley to be one of the distinctive symptoms between the paralysis where there is more or less lesion of the spinal cord, and the paraplegia brought on by indigestion or retention of urine. The following day the animal was standing, but knuckling over on to the fetlock joint of the near hind-leg every time he placed it on the ground—which he did incessantly during the day. Five granules of arsenate of strychnine and five granules of phosphoric acid were

given every hour for eight hours. On the third day the same treatment; the animal eating well, and taken out for ten minutes' walk. There was considerable stiffness of the hind-legs, and a want of confidence in locomotion. from the fourth day the patient had administered to him five granules of arsenate of strychnine three times daily, until he had taken ninety of the granules. From this time he made rapid improvement, and was shortly put to work, having made a radical recovery.

"In case No. 2 the symptoms were more exaggerated, and necessitated the continuance of the medicines for a period of five days. In this case the sulphate of strychnine was given, and the patient left the hospital quite recovered on the eighth day after the attack. Case No. 3 presents nothing of interest: the sulphate of strychnine, six granules every hour for eight hours, was given, and returned to work in ten days. Case No. 4 is so typical of this disease that I have thought it worth while to translate the whole of the case. The subject was a carthorse, brought to Mr. Landrin's establishment supported on each side by several men, and presenting the most marked symptoms of paraplegia. No sooner had he arrived than at once, in spite of every effort to keep him on his legs, he fell down; there was complete loss of motion and sensibility, and he took no notice of a needle driven into the muscles of the thigh. While down he was bled to the extent of about 16 lbs., and turpentine liniment applied with friction to the thighs and loins, in hopes the reaction might enable him to rise and get to the stable. This was found to be impossible, and a bed was made for him where he had fallen. He was ordered to get every quarter of an hour six granules of sulphate of strychnine and six granules of phosphoric acid, to be continued for two hours; sulphate of magnesia in gruel, and warm water injections. On the second day a cantharidine blister was applied to the loins and quarters, and during the day he got twenty granules of sulphate of strychnine, twenty granules of phosphoric acid, and twenty granules of bromide of camphor,—five of each to be given every hour: the bromide of camphor was given to prevent any ill effect from absorption of cantharidine. On the third day the patient with assistance stood on his legs for a quarter of an hour or twenty minutes, and he took during the day twenty-five granules of sulphate of strychnine and twenty-five of phosphoric acid,—five of each every hour. During the day it was remarked that he had a great difficulty in urinating, and the urine was of a deep-red colour. Five granules of hyosciamine were administered every quarter of an hour, and at the end of twenty granules there was an abundant flow of urine, which seemed greatly to relieve the patient. Since his arrival in hospital this animal had fed well, taking bran and green food. On the fourth day there was no change, except that with aid the animal got up for a few minutes several times during the day. He took in the course of the day thirty granules of sulphate of strychnine, and as many granules of phosphoric acid—five of each every two hours. On the fifth day he rose by himself, and lay down again naturally, getting up again several times during the day without aid. This day he got twenty granules each of sulphate of strychnine and phosphoric acid—five of each every four hours; he was also walked gently about for a quarter of an hour. Sixth day sulphate of strychnine and phosphoric acid in same quantities as day before; walked out during the day. On the seventh day he was sent home. During the whole of the treatment that patient had taken in gruel, morning and evening, 100 granules of sulphate of magnesia. In the fifth and last case recorded by Mr. Landrin, there was total loss of sensation and muscular power. Brought in on the 18th of June, 1874, the animal was so far recovered on the evening of the next day as to be able to walk home. On the 22nd the case was cured, and all treatment suspended. Sulphate of strychnine alone was given in this case."

XUM

Mr. DUNN also placed upon the table a morbid specimen of disease of the elbow joint in a heifer.

Mr. T. HOPKIN then read a communication on "A New Remedy for Colic." He said: "On making careful inquiry, there is no doubt but that it has occurred to some to try, in certain affections of the bowels, carbolic acid as an antiseptic—perhaps more so in human than veterinary practice. It is not to careful and laborious research that we are indebted, but the merest accident that first directed my attention to the value of carbolic acid in Colic. "On the 23rd of April in the present year, a brown mare was brought to the infirmary suffering from Spasmodic Colic; but, being out myself, the assistant told a groom to get a colic draught from the shelf in the surgery and give it. Instead of doing so, he took a bottle of dressing for wounds, containing carbolic acid ℥ij., glycerine ℥iv., rape oil ℥iiss., and gave it the patient in a pint of water. It had been dispensed for dressing wounds or cracked heels, and being a bottle of the same size and shape as our ordinary No. 1 colic draught, the mistake was easily made. Upon returning and hearing of it, the most natural inquiry came as to the state of the mare: we were, however, partially relieved upon receiving the assurance that she was all right, but you will easily imagine how carefully we watched her for fear of any evil consequences following. The relief given was so marked and speedy, that it was determined to try the medicine again. We have now given it in seventeen cases, and with such good results that I deem it of sufficient value to call the attention of the profession to it. The cases are as follows:

No. 1. Brown mare, April 28th.
„ 2. Roan mare, June 7th.
„ 3. Chesnut mare, July 30th.
„ 4. Bay horse, August 7th.
„ 5. Brown mare, August 14th.
„ 6. Brown horse, August 14th.
„ 7. Brown horse, August 30th.
„ 8. Roan horse, August 30th.
„ 9. Roan mare, August 31st.
No. 10. Roan mare, Sept. 14th.
„ 11. Bay mare, Sept. 15th.
„ 12. Brown cob, Sept. 16th.
„ 13. Bay horse, Sept. 18th.
„ 14. Brown horse, Sept. 19th.
„ 15. Brown horse, Oct. 9th.
„ 16. Black mare, Oct. 11th.
„ 17. Grey mare, Oct. 14th.

"In Spasmodic Colic, with profuse perspiration and violence, its action is wonderful, rarely failing to give relief in from twenty to thirty minutes. In Flatulent Colic it speedily reduces the tympanitis; and in cases where we suspect constipation, we give a dose of physic, or liberally of oil. The only fatal case was No. 10, a roan mare, which came in on Monday the 16th of September, and when I left home on the 25th was doing well; but died on the 30th from super-purgation. She was five or six days without any action of the bowels, and too much aperient medicine, I fancy, was administered; but, although the case terminated fatally, the relief afforded in the early stage was most marked, and, should another case come to hand, I have no fear in saying that, with proper care, a more favourable termination might be brought about.

"I will here briefly call your attention to the notes taken at the time of two or three of the cases. No. 3, chesnut mare, July 30th.—Symptoms: bathed with perspiration; abdomen largely distended with gas; up and down continually in box; so restless that it was not practicable to take the pulse: Treatment: carbolic acid ℥ij., glycerine ℥ij., rape oil, ℥ij., given in a pint of water. All signs of the ailment disappeared twenty minutes after the draught was administered. Case 11, bay mare, September 15th.—Symptoms: pulse 65; perspiration dropping off as though she had been drenched with water; great pain; abdomen largely distended; could not tand: treatment as before; a few minutes after draught, easier; and in an hour she was as well as ever. On the following morning she was sent home,

and nothing has been heard of her since. No. 13, bay gelding, September 18th.—Symptoms: 4.30 p.m., pulse 80; anxious, careworn expression; tympanitic; restless, and indications of continued pain; perspiration, etc.; gave, ʒi. carbolic acid in gill of oil. Stimulated abdomen; in a short time after was easier; at 8.15 p.m., pulse down to 48; no pain. In nearly all the cases recorded one dose was sufficient; but instead of dilating on the result, I recommend you to give it a fair trial. I am inclined to think that Calvert's acid is perhaps stronger than the commercial or impure acid, as it is called, and which was used in the seventeen recorded cases.

"Much has been said about the wonderful cures effected by some of the new drugs; and although this is one that some may say has been vaunted for everything, it is not on that account, but simply because the results, so far as our experience has gone, supersede any other remedy in a marked degree. The doses given varied from ʒi. to ʒiv. of the crude commercial acid, in either oil and glycerine, or oil, glycerine, and water; although the latter, not being a chemical compound, is, I am inclined to think, the most efficacious: when given in oil alone, the action is modified. The objection (if any) has been, that in cases that would have been under treatment several days, one draught has cured them; and, as most of you know, the British public like quantity as well as quality, and would rather pay a larger bill when more physic and less skill have been administered. Since writing the above, smaller doses of Calvert's pure acid have been given, with equally gratifying result."

Mr. W. A. Taylor also placed upon the table two beautiful morbid specimens: one a fracture of the inner condyle of the lower extremity of the humerus of a dog; the other an ossific transformation of a portion of the flexor brachii of a horse.

A cordial vote of thanks was proposed by W. A. TAYLOR, and seconded by T. TAYLOR, to Professor Pritchard for his attendance at the meeting; who in response said he was very pleased to be among his Northern professional friends,—that it was only want of opportunity that had prevented him from attending the meetings, and nothing could give him greater pleasure than to be able to attend at some future time.

Mr. W. A. TAYLOR said, with respect to the "Fleming Testimonial Fund," he could not understand why it had stood in abeyance so long; we had heard nothing of the matter for some two or three months. He would move that our secretary be requested to write to the secretary of the Central Committee, and ask him if anything definite had been arrived at, and if not, when was it likely such would be the case,—as in his opinion matters of this kind should not be allowed to stand over an indefinite period, as is the case in this instance. Seconded by Mr. TOM TAYLOR, and carried.

A vote of thanks was proposed and seconded to Mr. W. Dacre, Mr. T. Hopkin, and Mr. W. A. Taylor, for their papers, etc., which was carried unanimously.

A vote of thanks to the Chairman closed the meeting.

SAM. LOCKE, *Hon. Sec.*

YORKSHIRE VETERINARY MEDICAL SOCIETY.

THE last quarterly meeting for the current year was held at the Queen's Hotel, Leeds, on Thursday the 7th inst., the President, Mr. S. F. Fallding, in the chair. The following members were also present:—Messrs. T. Greaves, Jas. Freeman, Jno. Cuthbert, J. W. Anderton, Peter Walker, J. S. Carter, J. H. Ferguson, J. E. Scriven, W. G. Schofield, R. W. Murdoch, D. Spillman, J. Atcherly, W. Lodge, and the Secretary. Messrs. Pallin, 20th

Hussars, Robertson, Leeds, and S. Beeson, Harrogate, were present as visitors.

Excuses for non-attendance were received from Professors Williams and J. W. Axe, Messrs. M. E. Taylor, Jos. and Jno. Freeman, J. M. Axe, E. C. Dray, Jno. Schofield, and J. Howell.

The minutes of the last meeting were read and confirmed.

Messrs. J. Deighton, Riccall, York; F. Danby, Bainton, Driffield; and E. F. Dwyer, Great Northern Railway, Leeds, were unanimously elected members. Mr. S. Beeson, M.R.C.V.S., Harrogate, was nominated for membership.

Mr. ROBERTSON exhibited and described a case of fracture of the lumbar vertebræ in a yearling colt—the accident occurring during the operation of castration.

Mr. PALLIN exhibited a unique specimen of caries of the *os naviculare*. He also exhibited a singular specimen of diseased trachea, the result of an abscess depending from the inferior surfaces of the second and third dorsal spines, and pressing upon its superior surface; the abscess bursting through the tube, and causing death in a few hours. The horse was apparently in good health within a short time of its death, and no suspicion had been entertained that latent mischief was going on in the chest. Mr. Pallin likewise read a short paper "On the Use of the Thermometer in Veterinary Practice." He highly recommended the use of the instrument as a valuable aid to diagnosis, and described cases of disease illustrating its efficacy. He thought the thermometer very useful in showing the early presence of infectious febrile diseases. In the discussion that ensued, Messrs. Freeman, Schofield, Greaves, Lodge, and other members took part.

The PRESIDENT proposed, and Mr. FREEMAN seconded, a most cordial vote of thanks to Mr. Pallin. This was carried.

The Treasurer submitted the financial statement, showing a balance to the credit of the Society of £78 18*s.* 10*d.*

Mr. FREEMAN proposed, and Mr. MURDOCH seconded, that Mr. Peter Walker, of Bradford, be elected as President for 1879. This was carried unanimously.

Messrs. Fallding, Ferguson and Atcherly were chosen as Vice-Presidents; Mr. Cuthbert, Treasurer; Mr. Broughton, Hon. Sec.

Mr. SCHOFIELD proposed, and Mr. FERGUSON seconded, a vote of thanks to Mr. Fallding for the efficient manner in which he had carried out the duties of President for the year. Carried unanimously.

The gentlemen present were entertained to refreshments at the invitation the Leeds members.

WM. BROUGHTON, *Hon. Sec.*

PATHOLOGICAL SOCIETY OF LONDON.

AT the meeting of the above Society held on November 9th, Dr. CRISP exhibited the brain, spinal cord, and other organs from a dog which had died from Rabies. The dog had been bitten, in common with some ten or twelve other dogs, by a rabid dog three weeks before its death. Some of the animals had become rabid, and had been killed. The animal from which the specimens were taken showed signs of the malady after sixteen days' incubation: it looked wild, and refused food and drink; then showed signs of ill-temper, and its voice became changed, approaching a howl. There was excessive salivation, but no convulsive seizure, and the dog was constantly biting at anything that came in its way. Then tremors and *subsultus tendinum* occurred, and it died on the third day after the onset of

symptoms. Up to the time of death it was unable to stand, and continued at intervals feebly to attempt to bite; the pulse was quick, and the skin became cold; urine was freely voided. Dr. Crisp remarked that the symptoms of Rabies vary much in the dog—some exhibiting far less ferocity than others. A small but not ulcerated cicatrix was found on the nose. The brain and spinal cord appeared very vascular, and were placed in absolute alcohol for examination by the Morbid Growths Committee. The tongue was not enlarged, showed no vesiculation, nor were the salivary glands enlarged. The lungs were healthy, as were the abdominal viscera. The heart contained black blood, which presented normal microscopic characters. In Hydrophobia in man the period of incubation was generally longer, and dysphagia and nervous symptoms were more pronounced. Dr. Crisp mentioned that Hydrophobia had greatly increased in this country of late years,—the return for 1838 showing twenty-four deaths from that cause; 1862, only one death; 1871, fifty-six deaths; 1874, sixty-one; and in 1876 there were fifty-three deaths. He had fed two fowls on the flesh of this animal, with as yet no results.

Mr. HULKE asked whether the urine or the kidneys were examined; for in a case of Hydrophobia he had seen in King's College Hospital, about the year 1849, there was renal hæmaturia for some hours before death, and acute desquamative nephritis revealed on *post-mortem* examination. This patient had been kept under the influence of chloroform continuously for about fourteen hours, and it was questioned at the time whether this had anything to do with the production of the renal affection. A few days later he heard of another case at Charing Cross Hospital, and accordingly went to the *post-mortem* examination, in order to ascertain whether the same condition was met with in that case. He found the urine in the bladder to contain blood, and that there was nephritis also in this case. He referred to this because he had not observed that it was a condition frequently recorded. He thought it had been mentioned by some German authority.

Dr. DUCKWORTH said there was albuminuria in a case of Hydrophobia which had been under his care.

Dr. CRISP, in reply, said that both kidneys were congested; but the urine was not examined.

Dr. RALFE pointed out the importance of distinguishing between tetanic symptoms in dogs and those due to Rabies, and thought it possible that the conditions were frequently confounded. Many people bitten by dogs exhibited mild tetanic symptoms which were not of grave import, and he therefore urged the careful clinical study by veterinarians of all cases of assumed Rabies. Albuminuria might naturally be expected in such a disease as Hydrophobia or Tetanus.

ROYAL AGRICULTURAL SOCIETY.

AT the Monthly Council of this Society, held on Nov. 6th, the Hon W. EGERTON, M.P. (Chairman), reported that Mr. Duguid had resigned the office of Veterinary Inspector, and that Professor Simonds had offered, on behalf of the Royal Veterinary College, his services pending the appointment of Mr. Duguid's successor. The Committee had therefore arranged that Professor Simonds should undertake the office of Veterinary Inspector till Dec. 31st, 1878. Professor Axe had been sent by Professor Simonds to examine into an outbreak of disease in Kent. Dr. Burdon Sanderson had reported that Dr. Greenfield had been appointed as his successor as Pathologist at the Brown Institution.

Dr. BURDON SANDERSON had presented the following report to the Committee :—

"During the month of September an opportunity offered itself of inoculating twenty-seven animals with the exudation liquid of Pleuro-pneumonia at a farm near London (that of Mr. Keevil of Kensal Green). In one of these animals the result of the operation, although performed in the usual manner by Dr. Duguid, was unfavourable. This unlooked-for result, which was due to accidental infection of the cellular tissue in the neighbourhood of the puncture, compels me to admit that the operation is not so invariably free from danger as I hoped and believed. At the Brown Institution none of the inoculations performed by infusion into a vein failed to be harmless; but on the farm, where the circumstances were less favourable, one of the twenty-seven animals died, and had to be paid for out of our fund.

"Experiments have also been made at this Institution for the purpose of ascertaining whether, with due precautions, the usual and more simple method of inoculation could not be safely used, it having been suggested that the good results previously obtained were due not so much to the mode of inoculation as to the care used in operating. With this view five animals have been inoculated subcutaneously, with perfectly fresh liquid. At first no signs of local or general infection followed, but after a few days all became severely affected, and two out of the five died—a result which appears to be conclusive as to the impropriety of using this method.

"There are now at the Institution four inoculated animals, the immunity of which I am very desirous to test by cohabitation with other animals. But in carrying out this purpose I find myself arrested by legal difficulties, and particularly by the Order in Council which came into force on the 1st of October. According to this Order, no animal may be moved *into* any place containing infected animals. I therefore find myself compelled to recommend that these animals be sold.

"During the past six months experiments have been continued as to the nature and mode of propagation of several anthracoid diseases. I am desirous to go on with these experiments during the present winter. Reports on them will be forthcoming before next spring.

"I have lastly to state that the expenditure at the Brown Institution in connection with the experiments has exceeded the sum last received by £120."

The Committee gave notice that at the next Council meeting they would move for the renewal of the veterinary grant for 1879.

This report was adopted.

Jurisprudence.

VETERINARY OBSTETRICS.

WALSALL COUNTY COURT.—Before J. D. Griffiths, Esq., Judge.

Thursday, October 3rd.

GUY *v.* JONES.

THIS was a jury case, in which Mr. John William Guy, of Wednesbury, sought to recover from Mr. John Jones, of Bescot Hall farm, the sum of £50, for the death of a mare and foal through alleged negligence. Mr. C. Williams, from Messrs. Duignan, Lewis & Williams, appeared for the plaintiff, and Mr. James Slater, of the firm of Marshall & Slater, represented the defendant.

Mr. Williams, in opening the case, said: In consequence of culpable negligence on the part of the defendant, the mare and foal died; the mare had injured herself to such an extent that inflammation set in, and a fatal termination resulted. When his client bought the mare, he did not know she was in foal. When he put her out to grass with Mr. Jones, the latter remarked that he should have some little trouble with her, as she was in foal, and that he (Guy) ought to pay 7*s.* per week, and he would then see to her as if she were his own." Seven shillings a week was a high charge—far above the ordinary price of ley. Mr. Williams proceeded to observe that, from what defendant's son said, on the 4th of May he ordered the mare to be brought into the stable, and sat up with her until eleven o'clock that night; yet, notwithstanding the fact that the mare was going to foal, she was put into that stable and left by herself after eleven, and foaled during the night. If defendant thought she was going to foal, ought he not to have sat up with her? He maintained that Jones was bound to exercise that reasonable care that a man of sound judgment would have exercised with regard to his own.

John William Guy, plaintiff, said: Defendant called on him on the Friday, and they had a conversation regarding the mare. Defendant suggested she ought to work on a short time longer. He replied, as she was in foal he wanted to put her somewhere where she would be well taken care of. Defendant said he would take every care of her, and do for her as if she were his own. Defendant called again on 10th May, looked at her, and said she appeared nearer her time, and he had better let her come up next Sunday morning, at 7*s.* per week. He consented. Defendant observed she would require a little more care during time of foaling. Sent her on the 12th May. Saw her twice: going on all right. On the 5th July defendant called at 11 a.m.: said the mare had foaled, but the foal was dead; had fetched the mare up the previous evening, put her into the stable, and stayed with her till about eleven o'clock; went to her the following morning, a little after five, and had found the foal with the head and forelegs protruding, but dead; had got the foal away, but the after-birth had not come. Defendant also said the mare had torn herself, and the foal was a large one. Asked him to let him know how she was before 2 p.m. Defendant suggested giving her a drink,—one he had by him. Having heard nothing from him, he went down between three and four that afternoon. Met Mr. Parker, veterinary surgeon, on the way, and had some talk with him. After leaving Mr. Parker, met defendant, who said the mare was worse. Sent Mr. Marsh, who was with him, after Mr. Parker, and went on himself to defendant's farm. Found the mare in the stable by herself. The after-birth had not come, but was partly away. He went back, and sent two men down. On Saturday morning he went again. The after-birth had come away about eight o'clock. The mare seemed exceedingly weak. He telegraphed to Mr. Parker, but he did not come. Later on at night Mr. Meek was sent for. The mare afterwards died. He gave £35 for her. She was a heavy waggon-mare. It was not known she was in foal. He valued her at £50.

Cross-examined.—Had bought her in September, 1877, at a sale. There were but few people there. He did not pay for the foal. Got the mare cheap. She was six years old. He did not know when her time was up. Jones did say she would be better at work a little while longer. No one spoke to Mr. Parker but him: he laid the case before him, told him of the tear, the foal being dead, and that the after-birth had not come away. He met Jones. Jones did advise him to send for a veterinary surgeon, and told him he thought she was worse. He believed the defendant had had large experience in foaling mares; he knew defendant had foaled four mares that

year, and all safe. Defendant then told him the cleansing had not come away, and the mare was weaker. No veterinary surgeon came all that day. He saw the mare, saw the rent, and saw the after-birth hanging. Had mentioned the case to Mr. Parker, and he had told him what to do. He sent two men to carry out his instructions. He was in hopes the remedies applied would have a natural effect. He got a prescription from Mr. Parker made up at the druggist's to put round the tear—some oils and something—and he had also told him what to do as to after-birth. He had told him all this before Jones advised him to send for a veterinary surgeon. He could give no further reason why he did not send for Mr. Parker. The two men he (plaintiff) sent were two carters. He went down to see the mare about mid-day on Saturday. Sent a telegram on Saturday about mid-day, after he had seen the mare. He thought she was getting worse. Mr. Parker did not come. He did not send for any one else. He resolved to have Mr. Meek between eight and nine o'clock on Saturday night. He did not see the mare on Sunday. Saw the foal; it was a large one; could not say it was an extra large one. The last time he saw the mare before she foaled was several weeks.

Re-examined.—It was only nine weeks. Saw her twice. Had no experience of foaling mares, but knew the defendant had. He had no exact knowledge when the mare would foal, and could not communicate it to Jones. Defendant said nothing about sending for a veterinary surgeon. At eleven o'clock he told him her condition, but did not name danger: recommended a drench. He did not say if it was his he should send for a veterinary surgeon. No suggestion was made as to who was his veterinary surgeon. If Jones had let him know she was worse, he should have taken Mr. Parker up with him. Had reports from the men on Friday night and Saturday morning; the men remained the whole time up to her death. He sent one of his men in a pony trap to Walsall for Mr. Meek.

William Lang Japson was present at Guy's when Jones called. The former told Jones he had a mare which was with foal. Jones replied if he had her he might rely upon his taking as much care of her as if she was his own.

Thomas Hall (Guy's foreman).—Took mare on 12th May. Went to look at her occasionally: going on all right. Heard mare had foaled; went to her; held the cleansing up with a towel; fomented her with warm water; stayed all night. The after-birth came away about eight o'clock in the morning. Had been with horses all his life. Defendant's son had told him the mare had foaled on Friday morning; had met him on the road; had told him the foal was dead. Had asked him how that was? He said he was down in the field the night before; saw the mare, and thought she was about foaling; had told his father, and he said he would see her. He saw her, and sent her up; stayed with her till eleven; then said he did not think she would foal that night, and they might go to bed. When they got up next morning the colt was hanging. They had got the colt away about half-past five, and it was dead.

Cross-examined.—Had been at Guy's seventeen years. This was the first mare they had with foal. Had never foaled a mare himself, but had been with them with others. The mare was in good condition—looked very well. There was a number of horses. She was not the fattest. Saw her from time to time. She kept her flesh up, but was not in quite such good condition. He left the yard at seven o'clock. Went to the mare close on six on Friday evening; remained till she died. Saw the foal,—a fair-sized one, plump. Mare had oatmeal and water, and a bit of green stuff. She was restless and moving about the stable. She appeared on Friday night in severe pain. Was easier after the after-birth came away. At the last

XUM

became very restless. Died at 6 p.m. on Sunday. She had pain more or less all Sunday. He fomented the tear with warm water and anointed it with oils. At about nine on Saturday evening he went for Meek, who got there about ten. He said, "She's gone very far; would like to have been here sooner." Mr. Meek brought a drink with him and gave it her; gave her two besides. The drinks did not seem to have any effect, so far as he saw. Mr. Meek took a drop of blood off her.

Mr. E. Meek, M.R.C.V.S., said he practised at Walsall; was called in on Saturday night, July 6th; found the mare had recently foaled, and was very ill. Illness was due to inflammation of vagina and womb; right labia (commonly called "the shape") was torn, the rent extending inwards. External parts swollen. He considered her in very great danger. Bled her and administered a draught. Applied blister to belly; stayed while it was rubbed in part of the time. He blistered the belly to reduce inflammation. Could not say how much blood he abstracted. He considered bleeding in small quantities acted as a stimulant to the heart's action. When he found impression on pulse, then he stopped bleeding and administered diffusive stimulants. If he had seen her early, should have bled her till she fainted. Large roomy mare. Mare died that night. Witness made *post-mortem* examination; found cause of death to be inflammation of the vagina and uterus. There was a rent sixteen inches long in the vagina. The inflammation arose from the foal lying in the passage a length of time. The after-birth also not coming away would tend to increase inflammation. The foal swinging behind the mare, partly out of the passage, would bruise the internal parts of the vagina and cause the tear and inflammation of the passage. On *post-mortem*, found whole length of vagina bruised. No structural reason why the foal should not have come away in the ordinary course. If she had been left out in the field, he believed she might have foaled naturally. The mare in all probability was blocked against the stable door or wall.

Cross-examined.—The negligence lay in leaving the mare in the stable unwatched. There were certain symptoms of parturition: 1st, springing or enlarging of the udder; 2nd, formation of wax on the end of the teats; 3rd, dropping off of the wax and issue of milk. Springing of the udder frequently appeared as long as a fortnight before foaling, sometimes earlier—three weeks or a month. A mare overburdened with fat increased the danger of foaling. Should not diminish the quantity or quality of food in a mare very fat, but should advise her being kept at work.

Mr. Slater, in addressing the Court at considerable length for the defence, contended there was no negligence to be attributed to his client, and appealed to the jury not to compel an honest hard-working man—a man of long experience and good repute, and on whom the winter snow of age had fallen—to pay plaintiff £50 for which he should produce evidence to show there was not a shadow of claim.

John Jones (defendant), farmer, of Bescot Hall farm, was then called. He said he was sixty-three years of age; had been a farmer all his life; had considerable experience among horses, and with mares foaling; had been a breeder of horses for between twenty and thirty years, during which time he had had every year a greater or less number of mares foaled—four of his own that year. He had never lost a mare, either of his own or any other person's, from foaling, previous to this one of Guy's. It was very necessary to keep a close watch if one was to see a mare foal, as labour came on very quickly. Out of the four mares this year, three of them commenced foaling before any one was near, and the fourth without any one being by throughout. Before he commenced to breed horses on his own account, he was engaged in Herefordshire for about ten years with two gentlemen who were extensive

breeders of horses, and he had considerable experience there. Guy's mare was very fat, and always over-filled herself. About a fortnight before he received the mare, he received a note from Guy stating that he had bought a mare which proved in foal, and desired to know if he could ley her some time and see to her foaling. He saw the mare, and told him she did not look like foaling for a good bit, and that he might go on working her. Guy could give him no idea when her time was up. He had bought her at Darby's sale at West Bromwich. He (defendant) sent to Darby's to inquire, but could get no information. Told plaintiff he could send the mare as soon as he liked. Plaintiff asked what his terms were. He said he should only make his usual charge of 7*s.* per week, and would see to her just as if she were his own. He always charged 7*s.* per week for a full-grown horse for the first ten weeks; for the next ten weeks 5*s.*, which made it 6*s.* a week for the whole time. Mr. Guy's mare was a big cart-mare, very fat—much too fat. When he saw Mr. Guy, after he had seen the mare, mentioned to him the fact that she was very fat, and there was great risk in foaling when they were so fat, and that she had better be kept at work and kept down. Noticed when the mare was in the field she used to roll about a good deal. She commenced to roll as soon as she was turned into the field. It was very dangerous for a mare in foal to roll, but it could not be prevented: colt was apt to get turned. There was plenty of grass in the field, and the mare seemed to feed. He intended to have her up for a few nights before she was likely to foal, and keep her through the night without food. She was out from 5th May to 4th July. On that day he gave instructions to have her put in the stable. Noticed the udder was enlarging—this was the only symptom; but as she was so fat, thought it best to keep her without food for a few nights. Thought she would be three or four days before foaling. There was no appearance of wax on the teats or milk. The stable was fourteen feet by ten. Had foaled other mares in the same stable safely. He next saw her at five o'clock in the morning; he was first to enter the stable. Found mare's head towards the manger, hind parts towards the door, body in the middle of the building. He also saw the colt's feet, head, and shoulders: the latter had just come—they were wet and warm; did not notice walls as soon as he went in, to see if they were stained; was occupied with the mare. He took hold of the fore-legs and drew foal away. No difficulty. He opened foal's mouth and breathed in, but found it was dead. His son was with him. He noticed condition of mare. She was ripped at the bottom of her shape; there was very little blood from tear. He noticed rip when he first went into stable; when he put his hands out to catch hold of the feet he saw it. He then noticed the walls of the stable. There was no blood at all on them, or trace of mare having gone against them. In his opinion she had not been up. He bolstered her up with straw and made her comfortable, gave her oatmeal and water, and afterwards some vetches: this was the usual treatment with his own mares when foaled. He was surprised at mare foaling so soon. He had seen mares foal without wax on the teats or milk, but it was very rare. He sent word by his son to Mr. Guy that mare had foaled, the colt was dead, she had not cleansed, and was ripped, and some of them had better come down to her. He went to Mr. Guy's office himself at eleven o'clock, no one having come; met him coming from the stables; he told him he had bad news to tell him; Mr. Guy replied he had just heard it. He told him the mare had not cleansed, was ripped, and he had better have some one to her—a veterinary surgeon. Mr. Guy said, "What would you do if it was your case?" He said he should give her a drink he had got by him, but as she was not his own mare, he did not like to do so. He asked Mr. Guy who his veterinary surgeon was; he said, "Mr. Parker." He replied, Mr. Meek was nearest. Mr. Guy answered,

if he had Mr. Parker, he should have to telegraph for him. It was then agreed he should go round again and let Guy know how she was. He did so, telling him she was no better, and he wished him to send some one to her. Plaintiff said, "Oh, it's a very lucky thing: we've just seen Mr. Parker!" He said, "Oh, then you've sent him?" He replied, "No, I have not," and then turned to Mr. Marsh, who had heard their conversation, and asked him to ride after and fetch Mr. Parker; but he did not meet with him. On arriving home he found two of Mr. Guy's men there in charge of the mare. They said Mr. Guy had instructed them to keep the cleansing out of the rip and sit up with her all night, and not give her anything but gruel. After Guy's men came he did not interfere with her in any way. Met them on Saturday going to Walsall for Mr. Meek. The latter did not arrive till eleven o'clock at night. The mare died on Sunday. After death a great quantity of blood came from her shape, and ran down to the kitchen door. It was the largest foal he had ever seen in his life. Waggon-foals were more bulky than well-bred ones.

Cross-examined.—The mare was very fat—as if she had not been worked. She was a gross mare; fed fast at grass. She had previously had corn. He had examined her in the field; had put his hands on her; saw symptoms of foaling, and ordered her up. He did not see her again until in the stable. There was plenty of straw for her to foal on. He fetched more boltings afterwards to bolster her head up. Had never had a mare in the same stable foal previously without some assistance. He had known mares foal in a quarter of an hour with tackle on, and without any other sign than springing of the udder. He could not say how long the foal had been dead.

George Jones, son of the former, confirmed his father's evidence.

Edward Carey said Mr. Jones instructed him to fetch the mare up and put her into the stable for a night or two before she foaled. He cleaned stable out, littered it down with clean straw, and fetched the mare up about nine o'clock, at dusk. He drove her up to the gate, and George Jones caught her and led her to the stable. He was in the stable on the Saturday night, after the mare had foaled; heard Mr. Meek say she was fearfully ripped, and saw him bleed her.

Mr. J. Woodroffe Hill, F.R.C.V.S., Wolverhampton, examined by Mr. Slater:—

"Mr. Hill, you are a Fellow of the Royal College of Veterinary Surgeons?"

"I am."

"I believe you are the only gentleman in this district, excepting your partner Mr. Cartwright, who holds this degree?"

"I am."

"You have heard the evidence in this case: what is your opinion?"

"I consider the premonitory symptoms of parturition were not sufficient to lead defendant to expect the foal so early. If I saw a mare with only udder springing, should not consider she would foal within twenty-four hours. The presentation being a natural one, and the largest volume of the foal (the head and shoulders) being born when defendant visited her, proves to my mind that rupture of vagina must have taken place before assistance was rendered. Spontaneous rupture of the vagina may take place during parturition, or happen before, without any force beyond the natural throes of the mare. Rupture of vagina is very common in mares."

"Your authorities are agreed on that?"

"Yes."

"This work (Mr. Fleming's 'Veterinary Obstetrics') is your standard authority?"

"It is the finest work we have in the profession. The uterine contractions in the mare are more powerful than in the other domesticated animals, and

therefore, there being a greater amount of straining, rupture would be more liable to take place. Horses eat as much, or more, at night as by day. Consider defendant did right in taking the mare in at night. Stable was large enough for mare to foal safely to herself. Taking her condition at eleven o'clock that night, should not have expected her to foal before morning. Putting mare into green pasture would increase her size: tissues get large and soft on grass, without there being necessarily an accumulation of fat. Mares are best left alone unless there is an unnatural presentation. Should consider the difficulty over when Jones saw her. If the foal had been dangling out long, should expect it to be dry. The fore-parts being wet and warm, and the latter parts coming easily through on traction, proved it a recent birth, and not a prolonged labour. Retention of the fœtal membranes after parturition is very dangerous in the mare, and in such cases scientific help should be obtained without delay. Morbid alterations might be present, which an unscientific man would be unable to detect. This necessary scientific attendance, though suggested by defendant, appeared to have been disregarded, plaintiff allowing the after-birth to be retained fifteen hours before telegraphing for Mr. Parker. Death would result from hæmorrhage, inflammation or blood-poisoning, or what was termed Septikæmia. In such a case proper treatment, both surgical and medical, ought at once to have been adopted."

In his opinion, the bleeding by Mr. Meek hastened death: the mare was then excessively exhausted, and she was further depleted by the abstraction of blood. He should have plugged the rent, and administered brandy and iron, with nourishment: this of course was a matter of opinion. The heart was too enfeebled to respond to the after administration of stimulants. The mare foaled at five o'clock on Friday morning, and no veterinary surgeon arrived until ten o'clock on Saturday night—forty-one hours after delivery; he considered it was an act of great cruelty. He did not think the mare would have recovered under any circumstances, but something might have been done to alleviate her sufferings. Waggon-foals were larger in the joints and limbs than thoroughbreds—larger in every way. Did not consider any negligence could be attributed to Jones.

Cross-examined.—He thought death resulted from hæmorrhage, inflammation or blood-poisoning; he did not think there was a chance of saving the mare with a rent sixteen inches long, but means should have been tried. There could be no swinging backwards and forwards of the foal like the pendulum of a clock. If only the fore-feet and head and shoulders were protruding, they would not hang loosely down. Muscular contraction of vagina would keep it fixed to a great extent. If the mare struck foal against the side of the stable, it would do neither any good. He had heard people say that mares foal without wax on teats, but it was not correct. In natural presentations, mares were best left to themselves. If there were no more premonitory symptoms than in this case, he should consider it safe to leave her.

Mr. Williams.—"Will you quote from Fleming's work, p. 232, concerning necessary aid in normal parturition, and describing that they should be looked-to after foaling?" [Passage read.]

Mr. Hill.—"This will not help you, Mr. Williams. It says, 'Certain precautions should be observed at this period': these were observed, and the mare was put under cover by defendant; and the foal, being dead, required no after watching. There were no symptoms of foaling necessitating their being periodically watched. I do not consider from eleven o'clock to five a long night to leave her."

His Honour.—"I should consider it a long night in India."

Mr. Williams.—"Refer to page 236, Fleming, commencing 'Many veterinarians.'" [Passage read.]

Mr. Hill.—"I do not agree with it: *living foals* are produced in unnatural and difficult presentations; have attended such. Assuming the foal was where Jones says it was, I should have expected it to come unaided, and should not have touched it. The larger parts had already passed. If you were to examine a million natural foals, you would find the girth of the fore-quarters considerably greater than the hips. [Plate shown to his Honour.] The head was the first obstacle, then the shoulders; after which birth was comparatively easy. I know that in any animal that is gross the parts are large, but the passage is smaller than in lean ones. The parts would be large when Mr. Meek saw them, from distention; the genital parts of a fat animal are more liable to rupture than those of a lean one. A waggon-mare would be proportionately large to her foal. Nature generally accommodates herself to all things."

Re-examined.—In the case of a thoroughbred mare and a heavy horse, there would be more danger, but it would depend upon which parent the foal resembled. He did not consider Jones was in the least degree guilty of negligence. In natural presentation, mares invariably foaled in a lying position.

His Honour.—"What do you mean by 'invariably'?"

"They never foal standing, unless something is wrong—at least, to do so would be an exception to the rule."

His Honour then addressed the jury, after which they retired for a short time, and on their return into court, the foreman pronounced their verdict for the defendant.

The case, which was the first to be tried, occupied the whole day, and excited considerable interest.

HORSE CASE: DIFFERENCE OF OPINION.

IN the case of Harris *v.* Jacobson, tried at Lord Mayor's Court, Guildhall, on the 18th inst., the warranty of a horse being the point in dispute, a remarkable difference of opinion was expressed by the veterinary surgeons who gave evidence as to the time a disease known as "Curb" had existed in the animal's leg.

The plaintiff, it appeared, had purchased of the defendant a horse with a warranty of soundness, on the 14th August, and found in a few days that the animal went lame from what was alleged to be a disease of some standing.

On his behalf were called Mr. T. A. Dollar, of New Bond Street (who described himself as "Veterinary Surgeon to the Prince of Wales," but afterwards admitted that he was not a member of any College), Professor Pritchard of the Royal Veterinary College, and Mr. G. South, M.R.C.V.S., all of whom had examined the animal in question within fifteen days of its purchase by the plaintiff, and were of opinion that the horse was unsound from a curb in the hock, which must have existed at least a month. They considered that the curb was probably of a still earlier formation, as from the appearance of the part they were convinced that the animal had been blistered for it. It was impossible, therefore, for the horse to have been sound at the time of sale.

For the defendant (who stated that the horse was sound, and had no curb when he sold it) Mr. A. Farrow, M.R.C.V.S., and Mr. G. Chesterman, M.R.C.V.S., were called, and gave it as their opinion that the horse was sound at the time of sale, and the curb must have been thrown out afterwards. It was only imagination, Mr. Farrow stated, to suppose that after a week any one could tell how long a curb had existed; and Mr. Chesterman

could not agree with the witnesses on the other side that the symptoms indicated the existence of the curb before the 14th August.

After hearing other evidence of an equally contradictory nature, the jury retired; but were eventually discharged, not being able to agree to a verdict.

BREACH OF WARRANTY.

IN the Exchequer Division of the High Court of Justice, on March 11th, an action was brought to recover money paid as the price of a horse, upon the ground that it was unsound when supplied.

The plaintiff was a member of the firm of Messrs. Pontifex and Wood, engineers, in Farringdon Street, and the defendant, Mr. Withers, was a livery and bait stable keeper in Clerkenwell. In May, 1876, the plaintiff wished to purchase a horse for use in either a brougham or victoria; and after interviews had taken place between the parties, a horse was purchased by the plaintiff, and a receipt given in the following terms: "Received from Messrs. Pontifex and Wood the sum of £100 for a horse quiet to ride and quiet in harness." The horse, after having been in the service of the plaintiff for a short time, became lame, and it was returned. The horse was sold by defendant for £28.

The defendant denied he had warranted the soundness of the horse.

The jury found a verdict for the plaintiff for £100.

Army Veterinary Department.

Gazette, October 29.

VETERINARY DEPARTMENT.—The undermentioned gentlemen to be Veterinary Surgeons on probation:—Thomas Alexander Killick, and John Burke Savage.

Gazette, November 15.

ROYAL ARTILLERY.—Veterinary Surgeon of the First Class H. Bath retires upon temporary half-pay; Veterinary Surgeon A. Pitcher retires upon temporary half-pay.

Obituary.

ON the 18th of November, at Brixton, William Arthur Cherry died suddenly. Mr. Cherry, who graduated in 1845, was a son of the late Mr. Cherry, Principal Veterinary Surgeon to the Army, and had held the offices of Vice-President and Councilman of the Royal College of Veterinary Surgeons.

Another of the older members of the profession has been removed from amongst us, though for some years he had retired from active life. We allude to William Mavor, who succumbed to paralysis in the beginning of November. Mr. Mavor, after his graduation in 1843, practised with great success in London, far beyond which his name was well known, and was deservedly held in high esteem. He took a prominent part in the affairs of the Body Corporate, and was not only a Vice-President and Councilman, but acted as an Examiner to the Royal College for a long period.

Notes and News.

HORSES IN EUROPE.—According to the *Journal des Débats*, the number of horses in the principal countries of Europe is as follows:—Russia, 21,570,000; Germany, 3,352,000; Great Britain, 2,255,000; Hungary, 2,179,000; Austria, 1,367,000; and Turkey, 1,000,000. According to the same authority, there are 9,504,000 horses in the United States; 4,000,000 in the Argentine Republic; 2,624,000 in Canada; and 1,600,000 in Uruguay.

THE STRENGTH OF HAIR.—We have read of the hair of Samson and Absalom, but never before heard of the power or strength exhibited by this natural covering and ornament of the horse. The following is from the pages of our contemporary the *Live Stock Journal*, of October 18th:—"*Hair on Horse's Hoof.*—I have a young mare with hair growing out of the bottom of her hoofs. New shoes are no sooner put on than the hair forces them off again. They tell me about here it will disappear when she is four years old. Is that correct?—W. R. T. [Do not understand how growing hairs can force horses' shoes from their feet. Fully explain what you mean.]" This most extraordinary phenomenon should certainly be exhibited.

AMERICAN FRESH MEAT SHIPMENT TO EUROPE.—The *Kentucky Live Stock Journal* says:—The shipment of fresh meat to Europe from Boston, as well as New York, Philadelphia, and Baltimore, continues on a considerable scale. Live cattle, as well as freshly-killed meat, also are shipped in large numbers; the steamships from Boston for Liverpool during the past fortnight have taken 1000 head. One of the chief shippers is a Scotchman of Chicago, who receives his cattle or meat at Brighton. The meat comes dressed in refrigerator cars from Chicago, and is landed on the steamer wharves into the patent refrigerators on board the vessels. Meat will keep for the space of six weeks by the refrigerator process. The Liverpool papers say that the quality of American beef is still in no way inferior to that of British production, and is sold at lower rates: in fact, paradoxical as it may appear, at rates lower than are charged in the leading American markets. But this is one of the eccentricities of trade. Mr. Timothy C. Eastman was the pioneer in this business. He began his first shipment of fresh beef from America to England in 1875, and the lot consisted of 45 cattle and 50 sheep. At the close of 1876, and at the beginning of 1877, his shipments, mostly from New York, were from 600 to 1000 head of cattle per week. He has shipped about 60,000 head in all, having opened markets in London, Manchester, Liverpool, Sheffield, Birmingham, Leeds, Newcastle, Glasgow, Edinburgh, Dundee, and other towns in Great Britain.

The cost of shipping fresh meat to England has been reduced during the past two years. At one time it required about one ton of ice to every 2000 lbs. of meat, but the quantity of ice now needed is smaller under the improved refrigeration process. In no case is the meat allowed to freeze. It is said that beef treated for shipment is in better order to ship to the interior markets after it lands at New York or Boston, and keeps better than beef freshly killed on the spot. The only difference between American and British beef is, that the former is lighter. The light and thin beeves, which make up a large proportion of the supply sent to the sea-board, will not compete with the stall-fed short-horns and other improved breeds of the English and Scotch graziers. The cost of shipping cattle to England is from $20 to $25 per head, gold, for preparing, freight, and cost of transit, including commission on the other side. The average price realized is about $85, gold. Although Boston has been somewhat late about the shipment of meat to Europe, it is now doing its share of the business. The quantity of the fresh meat shipped to Great Britain last year represented 35,000,000 lbs., valued on this side of the ocean at $3,100,000.

HUMAN AND VETERINARY MEDICINE.—In terminating a series of well-written articles on Rabies, the *Medical Press and Circular* gives the labours of veterinarians ample recognition, and refers to the value of veterinary medicine in encouraging terms. In the "Historical and Biographical section," allusion is made to the excellent writings of Blaine (1817) and Youatt (1836), and then it is added: "After this period in England, we find a wide gap until we come to the year 1871, when Fleming published 'Animal Plagues: their History and Prevention,' followed, in the year 1872, by his work, now classic, 'Rabies and Hydrophobia.' No doubt, in England the rapid extension of medical periodicals tended very much to diminish the number of special treatises, while the various handbooks on general medicine and surgery also explain the paucity of monographs, as they all contain special articles on the nature of the disease. During the present century, Continental writers have produced works with inexhaustible rapidity. . . . . French veterinarians have paid particular attention to the disease; and we may mention, in particular, the name of M. Bouley, as one of the most accurate and reliable authorities of the present age; he has enriched the literature of Rabies by many valuable contributions. . . . . In concluding this report, we must draw the attention of the profession to one important subject. Rabies illustrates the close connection existing between human and veterinary medicine. Our knowledge of Rabies would have been limited, but for the researches of such veterinarians as Blaine, Youatt, Bouley, Pillwax, Bollinger, and Fleming; and society, and humanity in general, owe a debt of gratitude to the sister profession for the labours which have furnished our profession with the groundwork upon which all our knowledge is based. Human pathology cannot be divorced from its twin sister—comparative pathology; and we thoroughly agree with the aspiration of Fleming, that it is to be sincerely hoped that both branches of medical science may ultimately be looked upon as one, and that the benefits to humanity, to be derived from their union, may be fully realized. Veterinary medicine has of late years occupied a larger share, both of the attention of the public and of the Government. Much may yet be done to advance our knowledge of the actual existence and extent of Rabies in Great Britain, amongst all classes of animals. The veterinary schools might usefully assist by the publication of annual statistics on the prevalence of the disease; whilst Government might valuably aid by sanctioning the annual compilation of returns from the various districts under police supervision."

HORSE DISEASE IN CALIFORNIA.—A disease of a peculiar character has broken out among the horses of Tehama County, and portions of the Sacramento Valley, in California. It is said to be very fatal in its ravages, Mr. Cone, of Tehama, having already lost 10,000 dollars in horses and mules from its effects. It appears to be a species of epizoötic distemper affecting the head and glands, and is both contagious and fatal. In some cases it attacks the whole system, but is neither so contagious nor fatal. The latter seldom results in death unless the limbs become swollen and break out with sores, when the disease assumes the form of Glanders. This is the disease Mr. Cone's animals have, and it is raging to some extent all through the Sacramento Valley. The Tide Land and Reclamation Company at Union Island have had the disease among their horses, and many veterinarians and horsemen pronounce it Glanders. They have lost many, and several have been killed to stop the disease from spreading. The President, General Thomas H. Williams, called on a horseman of practical experience, who at once pronounced it Distemper; whereupon the General commenced treating the disease for Distemper, and out of several hundred horses that have had it he has lost only a few, and the balance have got well.—*Turf, Field, and Farm.*

HORSE-FEEDING BY ALGEBRA.—The application of chemical science to all questions of agriculture is attaining such vast proportions, that a farmer who pretends to know anything of his business will soon have to go through almost as severe a course of technical training as was expected from a medical student in the good old days of Dr. Slop. To say nothing of the various intricate problems connected with the fertilising of land, and the choice of suitable crops, there are a host of questions affecting the department of live stock which are being gradually illustrated by professors and *savants* in all sorts of ingenious ways. Amongst these the most important is probably that which deals with the feeding of horses—a matter which is pretty well understood, perhaps, in practice in the training stables both here and abroad, but which in theory remains still, to a great extent, unexplored by learned colleges and academies. M. Bixio, President of the Paris Omnibus Company, has lately published a treatise on this subject, in which not only the abstruse maxims of chemistry are applied to the economy of the stable, but formulæ are actually given for calculating by algebra the proportions of different sorts of food to be given to different sorts of horses. The learned writer commences by dividing the equine race into three separate categories: First, the animals who "do nothing at all"—that is to say, do not ever leave their stall for any purpose; secondly, those which "go out," but do not draw any carriage, "or carry any other burden than their own weight;" and finally, those which are engaged in work of some kind. The division is of a rather crude and elementary character, but the principle to be applied is the same as if it had been more elaborate. It appears from M. Bixio's experiments—tried upon the 10,000 horses which the Company keeps in Paris—that all food given to horses is of two kinds: the azotic foods, proper for mere alimentary purposes; and the carbonic, to be used when work has to be done. In proportion, therefore, as more or less work is demanded of the horse, so ought the proportion of the latter to predominate over the former. But the real test is not so much carbon or azotic elements as the substance called proteine. M. Bixio appends to his work a table by which the presence of proteinous elements can be estimated to a nicety; and with the table before him the trainer and farmer will henceforth be able to diet their horses by applying to these calculations a set principle of algebraical science.—*Globe.*

A RINDERPEST STRATAGEM.—The disadvantages of an invasion of Rinderpest are so numerous and serious, that we gladly chronicle an instance in which its supposed presence was attended with great benefit.—During the Franco-German war, a couple of hundred Uhlans arrived in a Norman village. One of the peasants hurried to a neighbouring hamlet to warn a well-to-do farmer that he might expect a visit from the unwelcome raiders. The farmer was equal to the emergency. Calling his wife and daughters, all went to work with a will. Torn quilts, tattered petticoats, dilapidated gowns, were thrown over the backs of the cattle, enveloping them up to their horns, while their feet and their heads were bound with straw. Then the sheep and goats were treated in the same fashion; bottles of medicine were scattered about; a large trough was filled with water, and in its midst was placed a great syringe. Up came the Uhlans, but at sight of the strangely-attired animals and the monster squirt they hesitated. At last one of the troopers inquired what was the matter. "The Rinderpest," said the farmer. He had to answer no more questions; his visitors turned their horses' heads and galloped off at their best speed, to make requisition elsewhere.

XUM

Correspondence, etc.

THE FELLOWSHIP DEGREE.

To the Editor of the VETERINARY JOURNAL.

DEAR SIR,—Everything must have a beginning; and it is necessary, before making a beginning, that rules shall be framed to ensure the success of our undertaking. The object of my addressing you is to point out a rule with reference to the "Fellowship Degree," which, in my opinion, requires to be amended.

The rule in question is to the effect that "a candidate for the degree of Fellowship shall produce a certificate signed by *three* Fellows, as to his status in the profession, etc., etc." I do not think a certificate signed by three Fellows is sufficient to answer the purpose intended. I presume the object of the rule in question is to ensure that candidates for this honourable distinction shall be gentlemen of honour and integrity. At present, it would probably be an easy matter for any member of the Royal College to obtain the signature of three "Fellows" with whom he may be acquainted, and by whom he is believed to be everything required; but should the name of a candidate be submitted to the profession generally, or to the Fellows as a whole, in the form of a notice from the Secretary, it is quite probable that if any individuals who have *not* pursued an honourable and gentlemanly course during their professional career offer themselves, they might be judiciously barred from obtaining the diploma. It is a well-known fact that there are, *unfortunately*, in the veterinary profession (as there are in all grades of society) men who have *not* in all their actions observed a gentlemanly or even honourable bearing, either towards their professional brethren or the public generally; and should such men be enabled to obtain the distinguished degree of Fellow, they would doubtless disgrace it, as they have already the members of the Royal College. As it is but right that we should guard ourselves from the encroachment of such, I feel justified in offering these remarks for the consideration of the Council and profession, through the pages of your Journal.

Yours faithfully,

Grantham, *Nov. 1st.* BEN. H. RUSSELL, Capt. F.R.C.V.S.

THE APPRAISEMENT OF OUR SERVICES.

To the Editor of the VETERINARY JOURNAL.

SIR,—The advancement made in the curriculum of study in our veterinary schools, and the higher order of examination demanded by the Royal College of Veterinary Surgeons at Red Lion Square before bestowing its diploma, does not seem to obtain, at least from large public companies, that amount of remuneration, or expressed value of its graduates, commensurate with such advance, if we may take the following advertisement as a criterion:—

> "A duly qualified Veterinary Surgeon wanted, to give his whole time and attention to the care of from 1200 to 1500 horses. A salary of £300 per annum will be given, and applicants will be required to find all necessary medicines, etc.—Applications, stating age and experience, with copies of testimonials, should be addressed to F. H., care of Messrs. G. Street and Co., 30, Cornhill, by Tuesday, October 15th next."

Now, the estimated value of such a stud, by one of our most experienced dealers, amounts to a capital of between £60,000 and £75,000. A qualified man is required to give his whole time and attention, supply all medi-

cines, etc., for the yearly stipend of £300—a sum not equal to ½ per cent. or 10*s.* per cent. That the fortunate veterinary surgeon will have to devote his whole time, no sane man acquainted with the working stud of omnibus horses can for a moment doubt; but that so small a pecuniary return should be offered for such service appears somewhat monstrous. Yet that there are many practitioners, and perhaps able ones, ready and willing to accept the post, we do not deny; and perhaps ere this one such has accepted it. Be this as it may, surely so important a trust should have its adequate reward,—a member of a learned and liberal profession should receive a suitable compensation.

There are many veterinary surgeons scarcely earning £300 a year, it is true; and they are good experienced men, who, in all probability, would rather forego their practice for the post than submit to the many extortionate demands they are compelled to endure, in the form of "tips," "commissions," and "black mail" by coachmen, grooms, head stablemen, bailiffs, etc.

It is a sad pity that the owners of valuable horses and cattle do not interest themselves more with their own property; for it far too frequently happens that when a horse is sick they never hear thereof, or if they do they care not to whom the animal is entrusted. Their servants have power to employ any one they may please to patronise—either quack or qualified practitioner; and usually it is only in serious cases that they fly to the latter. Such apathy on the part of stock-owners should not exist, for it would eventually prove vastly to their advantage to appoint their own practitioner.

Now that the Royal College is sending forth from Red Lion Square men of greater merit, the public should recognise their efforts, and appraise the services of such practitioners with no niggardly spirit; and the public, moreover, should learn to employ veterinary surgeons as a means whereby to "prevent" as well as "cure" diseases. They should bear in mind that the laws of hygiene, sanitary science and epizoötology are as much a necessary part of the modern veterinarian's qualification as the curative art and surgical science.

Yours truly,

"VERBUM SAP."

OUR FEES.

To the Editor of the VETERINARY JOURNAL.

SIR,—Your correspondent Mr. James Moore surely cannot be in earnest when he states that the Professors at the Royal Veterinary College, Camden Town, examined horses at SIXPENCE a head for dealers!!

For some weeks past, an interesting correspondence has been going on in the *Live Stock Journal* anent the Veterinary Institute above mentioned; and one writer, "Cavalier," remarks that the horse-dealers are great supports of the College in the examinations of their horses. The ball is now open,—that is, if your correspondent is correctly informed by his friend the large dealer.

'Tis sad news for me; for I have just arrived in London to try honest competition. However, as far as examinations are concerned, I must say I am out of it; for who will pay me a guinea when a professor can be employed for so small a mite? We must be in dreamland, not England! I must confine myself to the medical and surgical department, or return to my old rural haunts.

I certainly now must find some other topic than "Fees" for your valuable, interesting and independent journal, or take a strong dose for my *cacoethes scribendi*.

Yours truly,

London, *Nov. 11th*, 1878. "ARTEMUS SECUNDUS.

XUM

THE VETERINARY DEPARTMENT OF THE PRIVY COUNCIL.

To the Editor of the VETERINARY JOURNAL.

SIR,—It appears the powers of this Department continue their most incomprehensible and extraordinary measures with a view to the total suppression (?) of some of the direful contagious diseases of animals in this country. The *London Gazette* gives the following marvellous notification (*vide* the *Live Stock Journal*) :—

"According to the *London Gazette*, the Privy Council accepts as the qualification of a veterinary practitioner that he has been employed by the local authority as an inspector or veterinary adviser under the Contagious Diseases (Animals) Act, although he does not hold the certificate of the Highland and Agricultural Society of Scotland, and is not a member of the Royal College of Veterinary Surgeons."

Can it be possible that our Professor at the head of this Department advocates the introduction of the unqualified as inspectors, instead of those who are qualified,—and that, too, under his own and colleagues' teaching? Surely there must be something palpably wrong somewhere; and I opine something has been wrong since the accouchement of the Veterinary Department! Had it remained in an acephalous condition it could not have become more unprofessional.

It has always occurred to me, and that most forcibly, that the appointment of the "head" of the Veterinary Department was most erroneous from the very first: one "head" must be of most extraordinary development (even a Cuvier's would not suffice, I believe) to grasp and work out the most abstruse problems exhibited in this important Department. Not that I reflect on the professors who have each undertaken the post: their task has been no easy one; for their courage, beyond all apprehension, deserves our admiration, in attempting such an arduous imposition.

My idea has been that the very highest possible authorities in the realm should be obtained by a Government to advance measures for the suppression of these terrible scourges among our flocks and herds. To obtain such, surely the proper quarter would be the rendezvous of our veterinary sages—*i.e.*, The Royal College of Veterinary Surgeons, Red Lion Square. The President and his Councilmen being in direct communication with the profession in its entirety, and with the Court of Examiners, should certainly be the most valuable body to advise the Privy Council in the selection of the best cattle pathologists in the craft,—men whom they would wish to represent the profession in so important a matter, not only to the country, but to the veterinary medical profession of Great Britain. For the eyes of the world behold the action taken in this Department, and if the Department err, the *onus* falls on the profession in general.

With all that has been done and undone since 1865, the year of fearful havoc, to this present day, diseases of a contagious and infectious nature are still rife; and surely something must be wrong in the professional department, or the learned adviser would not sanction the appointment of other than the duly educated from the London or Scotch schools. These should have more power of penetration than the unqualified: or can it be feared, "too penetrating," and likely to cause a leakage? This is a serious consideration.

I cannot see other than a depreciating tendency to the advancement of cattle pathology by making one professor of one isolated school the sole shining light of the profession to the State. Surely it is scarcely fair to the professors of the Scotch schools—most excellent cattle pathologists! But setting all this aside, the State should offer every inducement to all who will make this important branch of medical science their special study. No

professor of any school should have such authority; the State should offer great encouragement to all schools, their professors, and the practitioners. The Council of the Royal College of Veterinary Surgeons should be, and are, in possession of sound information on the subject; they know who are our best equine, bovine, and canine pathologists. No professor of any school has equal power of observation; for it extends to the whole profession, whilst the professor is confined to the precincts of his school.

Only let the above obtain; make the profession responsible for itself; then, if it prove incompetent, censure it, appoint the unqualified, reappoint one professor, and disendow the R.C.V.S. If matters do not mend, they cannot become worse. When the qualified "head" runs a-muck among qualified and unqualified, the best that can be said is, "Its a bad omen."

Yours truly,

London, W., *Nov. 11th*, 1878. ROBERT WARD, F.R.C.V.S.

THE FLEMING TESTIMONIAL.

To the Editor of the VETERINARY JOURNAL.

SIR,—Nine months have elapsed since the meeting in London, of members of the profession, to inaugurate a fund for the especial purpose of presenting Mr. George Fleming with a testimonial, in acknowledgment of his eminent services rendered to the veterinary profession as an author and an indefatigable worker in all things petaining to the welfare of our calling.

I should be sorry to charge the Committee elected at the original meeting in Red Lion Square, or any member of it, with being intentionally inactive; but I do really think the time has arrived when we should bestir ourselves to consummate the project evolved on the occasion alluded to.

It will be known to the secretary of the Central Committee that the Provincial Associations have taken the matter up: indeed, the secretaries of two of the provincial committees have conferred with him on the subject, and the subscriptions paid and promised amount to a considerable sum. Now, as provincials, and not being the originators of the testimonial, we are anxiously awaiting, before adding our *quota* to the original fund, the intentions of the Central Committee with respect to how, when and where the testimonial will be presented.

A great number of subscribers in the northern counties wish for a speedy decision upon the points referred to; and I would respectfully suggest that those who are supposed to take the initiative would exert themselves to accelerate the completion of the object in view.

It may be urged that enough time has not been allowed for thorough circulation of the matter; but as the "Fund advertisement" has been conspicuous by its absence from both our professional journals for the last four months, it would appear that those at headquarters are of an averse opinion.

Our profession has indeed lapsed into a deplorable state of selfishness and want of appreciation, if in nine months' time it cannot be roused to acknowledge, in a tangible form, the prodigious works of a man whose whole life has been nobly devoted to his profession's cause.

In conclusion, I would suggestively add that, prior to any decision being arrived at as to the form the testimonial should take, it might be advisable for a deputation to wait upon Mr. Fleming, in order to ascertain privately his preference, if any.

I am, sir, your obedient servant,

London, *Nov. 14th*, 1878. W. A. TAYLOR, F.R.C.V.S.

XUM

To the Editor of the VETERINARY JOURNAL.

SIR,—It is now a long time since the "Fleming Testimonial" was first mooted in London and elsewhere, and a year has almost sped since a Committee was formed to carry out what had been spoken of for several years. May I ask any of those who are on the said Committee whether anything has been done by it lately in the matter? I was one of the first to do homage to the gentleman named; and considering what he has done for the profession, and what he may yet live to accomplish, I was indeed glad of the opportunity to testify, to the best of my means, to the esteem in which I have long held him. No one in this country has ever done so much for veterinary science as Mr. Fleming, and no one could act more honourably and independently than that gentleman, in promoting the well-being of the profession, politically, socially, and scientifically. Surely the recognition which he so well merits from us is not going to be withheld from apathy, or any other discreditable cause. For many months the subject has dropped out of sight, and those who should have been its most active promoters, and who took office as such at the meeting held at the commencement of the year, appear to have sunk into a state of torpor. Surely if the business is worth doing at all (and of this there can be no two opinions) it is worth doing well. There is very little evidence indeed that much has been done in the south. No proceedings of meetings have been published by the Committee, neither has any list of subscribers appeared. In fact, I for one am totally unaware of the progress the movement has made. We know the gallant officer who is Chairman of the Testimonial Committee to be an excellent man of business; and one would have thought that the Committee must have succeeded in achieving a large measure of success.

May I also ask if the medical profession has been requested to join the movement? Mr. Fleming is well known as an enthusiastic advocate of the claims of comparative pathology, and the medical world is greatly indebted to him for important services in medical and sanitary science. I am sure that if this co-operation has not been sought by the Committee, a graver oversight could not have been made. And with regard to the agricultural community, has their assistance been solicited? If not, then another serious omission has been allowed to take place; for no member of the veterinary profession has been more energetic than Mr. Fleming in protecting agriculturists from the losses caused by contagious diseases, and defending their interests both in professional and public journals.

The vast labour Mr. Fleming has imposed upon himself for so many years could not, we may be sure, bring him any emolument or reward. His position even at the present moment, as a mere regimental veterinary surgeon, is a kind of proof of the discouragement he must have experienced while devoting time, health and fortune to the professional and public service. Are we, now that we have an opportunity of testifying that we are not altogether indifferent to those who have done so much to serve and honour our calling, to miss that opportunity, and prove ourselves utterly devoid of gratitude or unconscious when great benefits are conferred upon us? I fervently hope not; and I appeal to the Committee and its gallant Chairman to bestir themselves; for apathy or delay, or whatever it may be, are bringing something like disgrace or ridicule upon them and us. Let us have some tidings of what has been done and is intended. "Hope deferred maketh the heart sick."

Your obedient servant,

"A NORTH COUNTRY SUBSCRIBER."

November 16th.

IMPORTANT NOTICE: FLEMING TESTIMONIAL.

To the Editor of the VETERINARY JOURNAL.

SIR,—Will you kindly announce that the meeting to be held at No. 10, Red Lion Square, on December 5th, at 8.30 p.m., is to take into consideration the above subject, and decide as to the form the testimonial should take? The Central Veterinary Medical Society holds its meeting at 7 p.m. on the same evening, when the discussion on "The Prevailing Equine Skin Epizoöty" will be resumed. The President of the Society will be pleased to welcome any visitors who may attend.

Yours obediently,
R. WARD, F.R.C.V.S.

RABIES.

To the Editor of the VETERINARY JOURNAL.

DEAR SIR,—If my memory serves me, I think you at one time made a request to the members of the profession that they should record cases of Rabies coming under their notice. Herewith I send notes of five cases which occurred in my practice this year.

Yours very truly,
W. DACRE, M.R.C.V.S.

Altrincham, Cheshire, *November 6th*, 1878.

FIVE CASES OF RABIES.

1. January 1st.—Black retriever dog, ten months old. Violent paroxysms of rage; was bitten one month before by a dog said to be mad.
2. March 2nd.—Scotch terrier dog, six years old. Furious form; gnawed his way through the side of a hamper in which he was placed; no history of inoculation.
3. May 8th.—Half-bred Esquimaux: a young dog. I saw this animal bite two dogs in the street. On my information he was shot by the police, and I afterwards made a *post-mortem* examination. No history as to inoculation.
4. September 25th.—Liver-coloured retriever dog, two years old; *dumb form.* Was of a quarrelsome temper, and had often been bitten.
5. October 5th.—Liver-coloured retriever bitch, seven years old; *dumb form.* No history of inoculation.

Post-mortem examinations were made of all these animals, and the characteristic appearance of the stomach was observed in every one.

THE PENAL AND APPRENTICESHIP CLAUSE.

To the Editor of the VETERINARY JOURNAL.

SIR,—The General Medical Council have taken the Dentists' Act into deep consideration, as the perusal of the last report of their proceedings shows, in which it is stated, "That pupils who have been articled to their fathers or brothers—between whom money transactions would be nominal—be in all other respects considered to be in the same position in regard to registration as those pupils provided for in the first part of section 37 of the

Dentists' Act, who have paid premiums for instruction." "That students who commenced their professional education by apprenticeship to dentists entitled to be registered, or by attendance upon professional lectures before July 22nd, 1878 (when dental education became compulsory), shall not be required to produce evidence of having passed a preliminary examination in arts." "That the registration of dental students be carried on at the Medical Council Office in London, or at the branch Council Office in Edinburgh or in Dublin, in the same manner as the existing registration of medical students, and with the exceptions specified in the preceding paragraph, subject to the same regulations as regards preliminary examination in arts." It is to be hoped that this may prove an incentive to our own Medical Council to be on the alert for their own interests and that of the profession at large. The report showeth they have great and deep regard for the Apprenticeship Clause. Surely, if it be imperative in dental surgery, it must be equally, if not more so, in veterinary surgery and science.

The apprenticeship is a far more important matter than many have been led to believe: and why? Because the subject has never been soundly and thoroughly dealt with. When this is done in our Council, but few indeed will admit that those who have advocated the clause were in error, but rather be led to declare it to be the royal road to professional success and the obtainment of the penal clause. The young men then sent forth licensed to practise will prove to be practitioners indeed, and our examiners on the Practical Examining Board will be able to sign the diploma *without* fear or trembling, equivocation or mental reservation.

Yours obediently,

"SENEX."

PRIVATE PRACTITIONERS AND THE ARMY.

To the Editor of the VETERINARY JOURNAL.

DEAR SIR,—I have been induced to address you upon a subject which has caused not only difficulty, but a certain share of unpleasantness (to judge from a conversation which transpired a day or two ago with a gentleman interested in the subject).

For many years I have been in the habit of not only doing duty for army veterinary surgeons when on leave, but have been employed by commanding officers of batteries and squadrons of cavalry when no army veterinary surgeon was attached.

In every instance it has been my aim to exact a *lesser* sum for medicine and attendance than is charged under ordinary circumstances—the parties requiring my aid not being regular clients.

In every case, when I have furnished an account, it has caused much trouble, as well as unnecessary correspondence, and my claim has *never been paid in full!*

This is not the only complaint I have to make.

Some months ago I was called upon to act for the battery now stationed here, before a veterinary surgeon was attached for duty.

When my account was asked for, it was furnished in detail; and I may add that the case was a most critical one, and was brought to a successful issue.

I prescribed, and sent a certain number of draughts, *per diem*, one to be administered every six hours.

My account was signed by the Major commanding, and I believe countersigned by some veterinary surgeon.

Imagine my surprise when the account was brought by the paymaster-sergeant for settlement: I was *offered some shillings less* than the claim, and some of my figures *erased* with red ink—viz., four draughts were substituted with the figure 2! Just half the number of draughts and half the sum!!

I refused to accept the proffered sum upon principle, as a matter of course. Can it be believed that such has been done by the head of the Veterinary Department? So it is!

I could not accept the money tendered, simply from the fact that I, the commanding officer, and the veterinary surgeon who countersigned the account, were each individually charged with fraud or misrepresentation, by interpretation or inference.

The account remains unsettled.

Perhaps you, my dear sir, being a distinguished member of our body, as well as holding Her Majesty's commission in the Life Guards, may be enabled to explain this, to me, most extraordinary proceeding.

At all times I have done my best in assisting army veterinary surgeons when on leave, and my pocket has often suffered: at the same time, I have felt a pleasure in assisting my brethren when they have gone on leave.

I cannot, however, understand why my claims should be ignored, and more so when my figures are repudiated. This latter act, on the part of the head of the Veterinary Department, I must strenuously oppose.

In conclusion, I may remark that I have no ambition to act for the army, but if employed I must be paid my just dues.

Faithfully yours,

R. H. DYER.

Limerick, 30*th October*, 1878.

"AN EARNEST APPEAL."

To the Editor of the VETERINARY JOURNAL.

DEAR SIR,—In answer to above, on behalf of young Hurst, I beg most gladly to offer 20*s.* towards a fund for sending him to College.

I hope, should sufficient funds be raised to enable the young man to prosecute his studies to a successful end, he will not forget that those who have come forward to assist him also intend it to assist his mother and her family through him.

I enclose cheque for 20*s.*

Yours truly,

T. FLETCHER, M.R.C.V.S.

3, Ellin Street, Sheffield.

To the Editor of the VETERINARY JOURNAL.

DEAR SIR,—Since writing the letter which appeared in the October issue of the *Journal*, I have ascertained that Mr. B. Clayton, of Barnet, and another gentleman whose name has escaped my memory, have consented to act as treasurers to the fund being raised for the family of the late Mr. Hurst.

Yours truly,

L. C. TIPPER, M.R.C.V.S.

Birmingham, *October 23rd*, 1878.

[The cheque for 20*s.* received from T. Fletcher, M.R.C.V.S., Sheffield, will be forwarded to Mr. Clayton when we are informed of his exact address. —ED. *V. J.*]

TO CORRESPONDENTS.

COMMUNICATIONS from G. Morgan, G. A. Banham, "Nabocklish," R. W. Murdoch, and others, are pressed out of this month's issue, but will appear in our next.

AN INTENDING STUDENT.—The books you will require are rather numerous. The following is a list of those recommended in the prospectus of the Edinburgh Veterinary College (Dick's) for the present year :—

"*For the 1st Period of Study.*—Finlay Dun's Veterinary Medicines, Wilson's Chemistry, Professor Crum Brown's Elementary Chemistry, Balfour's Elements of Botany, *are particularly recommended*, while the introductory part of Strangeway's Anatomy, and either of the following works on Physiology—viz., M'Kendrick, Huxley, or Cleland's Physiology—may be studied in spare moments.

"*For the 2nd Period of Study.*—Strangeway's or Chauveau's Anatomy, Turner's 'Introduction to Anatomy,' Kirke's Physiology and Nicholson's Introductory Zoology *are particularly recommended;* Dick's 'Veterinary Papers' and Fitzwygram's 'Horses and Stables' may be studied at intervals.

"*For the 3rd Period of Study.*—Fleming's Obstetrics, Fleming's Veterinary Sanitary Science and Police, Williams' Principles and Practice of Veterinary Medicine and Surgery, Green's Morbid Anatomy, Cobbold's Entozoa of the Domestic Animals, Harley and Brown's Microscopical Demonstrations, Fleming's Essay on Horse-shoeing, Lascelles' Law of Warrantry."

Communications, Books, Journals, etc., Received.

COMMUNICATIONS have been received from F. F. Collins, Simla; R. S. Laws, Toulouse; G. Morgan, Liverpool; J. H. Steel, London; J. J. Meyrick, Rawul Pindi, India; Professor M'Call, Glasgow; "Artemus Secundus"; L. C. Tipper, Birmingham; H. Olver, Tamworth; "Senex"; T. Fletcher, Sheffield; B. H. Russell, Grantham; T. A. Cooley, London; J. Hill, Wolverhampton; Professor Walley, Edinburgh; Professor Williams, Edinburgh; A. J. Owles, Dublin; W. Dacre, Altrincham; A. E. Macgillivray, Banff; R. F. Frost, Rangoon; J. Rowe, London; G. A. Banham, Cambridge; "Verbum Sap."; S. Locke, Manchester; W. A. Taylor, Manchester; "A North Country Subscriber"; "Nabocklish"; W. Broughton, Leeds; P. Deighton, Riccal; R. W. Murdoch, Leeds.

BOOKS AND PAMPHLETS: *E. W. Gough*, Centaur or the Turn Out; *A. Armbrecht*, Lehrbuch der Veterinär-Chirurgie (iv. Leiferung); Bulletin de la Société Centrale de Médecine Vétérinaire; *M. Horace Hayes*, A Guide to Training and Horse Management in India; *J. Feser*, Die Polizeiliche Controle der Markt-Milch; *O. Siedamgrotzky*, Ueber die Leukæmia bei den Hausthieren; *F. Vacher*, On the Diseases of Animals rendering them unfit for Food of Man; *J. Drysdale, M.D.*, The Germ Theories of Infectious Diseases.

JOURNALS, ETC.: *American Veterinary Review; Students' Journal; Chicago Live Stock Journal; Annales de Médecine Vétérinaire; Journal of the National Agricultural Society of Victoria; Wochenschrift für Thierheilkunde und Viehzucht; Archives Vétérinaires; Lancet; Der Thierarzt; Recueil de Méd. Vétérinaire; Journal de Médecine Vétérinaire; Edinburgh Medical Journal; Practitioner; Archivio di Medicina Veterinaria; Animal World; La Clinica Veterinaria; Deutsche Zeitschrift für Thiermedicin.*

NEWSPAPERS: *Stirling Reporter; Scotsman; Glasgow Herald; Montreal Herald* (three copies); *Edinburgh Courant; Leith Herald; Birmingham Gazette.*

All Communications, Books for Review, Advertisements, etc., must be addressed to the Publisher, 20, King William Street, Strand, W.C.

Morbid Specimens are to be forwarded addressed to the Editor, "Veterinary Journal" Brown Institution, Wandsworth Road, London.

Communications must be accompanied by the name of the writer, whether he may desire to have it published or not. Anonymous letters and articles cannot be inserted. The Editor does not hold himself identified with the views or opinions expressed by Contributors. Communications for insertion in the next number must arrive on or before the 15th of the present month.